

SAVING WILDLIFE AND INSPIRING CARE



To Sustain Biological Diversity • To Teach Ecology • To Inspire Care

THE PURPOSE of the Wildlife Conservation Society, since its founding in 1895 as the New York Zoological Society, has been to save wildlife and inspire people to care about our natural heritage. Today, 100 years later, that purpose is achieved through the nation's largest system of urban zoos (the Bronx Zoo, the Aquarium for Wildlife Conservation, and the Wildlife Centers in Central Park, Queens, and Prospect Park), pioneering environmental education programs used throughout the United States, and the world's leading international conservation program devoted to saving endangered species and ecosystems. We are working to make future generations inheritors, not just survivors.



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A CENTENNIAL
KISS FOR
SUPERVISOR
JOHN
MCELLIGOTT
AT THE
SOCIETY'S
1995 ANNUAL
MEETING.

CONTENTS

| Trustees and Advisors | 2 |
|---------------------------------|----|
| Chairman's Letter | 4 |
| President's Letter | 6 |
| People and Wildlife in New York | 8 |
| Educating the Next Generation | 22 |
| International Conservation | 32 |
| Projects Around the World | 43 |
| Centennial Events | 46 |
| Animal Censuses | 52 |
| Financial Report | 56 |
| Contributors | 66 |
| Committees | 72 |
| Staff | 73 |
| Staff Bibliography | 78 |
| Facts and Figures | 80 |

The City of New York, through its Department of Cultural Affairs, provides part of the annual operating support for the Bronx Zoo/Wildlife Conservation Park and the Aquarium for Wildlife Conservation, both of which occupy City-owned buildings on City-owned property.

The Wildlife Conservation Society administers the Central Park, Queens, and Prospect Park Wildlife Centers for the City's Department of Parks and Recreation, which provides annual operating support for the Centers.

The Society also receives annual funds from the Natural Heritage Trust, a program of the New York State Office of Parks and Recreation.

COVER: TWO OF FIVE LOWLAND GORILLAS BORN AT THE BRONX ZOO SINCE 1993.
BACK COVER: LOWLAND GORILLA I N NOUABALÉ-NDOKI NATIONAL PARK, CONGO REPUBLIC.

When our first annual report appeared on March 15, 1897, the Society was nearly two

years old, William T. Hornaday was director of the Bronx Zoo, the South Bronx Park was preferred (and then chosen) as the site for the new zoo, there were 89 members beginning at \$10 each, and the Society's first field trip, in Alaska, was about to begin. By the time of our exact centennial on April 26, 1995, the Bronx Zoo and its later-joining sisters (the Aquarium and three Wildlife Centers) had hosted more than 300 million people, there were 53,185 members starting at \$41 each, and our international conservation program was working on about 270 projects in 51 countries.

Many other figures from our 100-year history could be cited: the number of schoolchildren we have reached, not only in New York City but around the country and the world, the number of endangered wildlife species we have helped save, the number of wildlife parks and reserves we have helped establish, the number of wildlife protection laws we have helped pass. These accomplishments are admirable in themselves, but the story continues and the need for action is more urgent than ever before, action on behalf of conservation, education, and service to our vast public.

It is gratifying to record that the City government of New York seems to realize these needs, despite budget cuts that have affected all cultural institutions. The Society's existence is based on a partnership with the City of New York that goes back to the beginning in 1895. This year, the City came through with another outstanding affirmation of our partnership in the form of major funding for the Bronx Zoo's Congo Gorilla Forest, which promises to be a model for wildlife exhibition into the 21st century and a great boon in saving African forests, educating future generations, and engaging the people of New York and all our visitors. With groundbreaking set for October 18, 1995, and opening for the Bronx Zoo's centennial in 1999, the City pledged a total of \$9.5 million: \$4 million through the Office of the Mayor, \$4 million through the City Council, and \$1.5 million through the Bronx Borough President. We are grateful for the leadership and interest of Mayor Rudolph Giuliani, Council Speaker Peter Vallone, and Bronx Borough President Fernando Ferrer.

The private side of the partnership has raised about \$10 million

for Congo Gorilla Forest as the flagship project in the Wildlife Crisis Campaign, chaired by Trustee Dailey Pattee. Major gifts were received in the past year from the Charles Hayden Foundation, the Bodman Foundation, Leonard and Allison Stern, George Hecht, and, just as our fiscal year was ending, from Chemical Bank.

Private support remains vital to the cause in all areas. Total contributions from individuals, foundations, and corporations, including bequests, totaled \$16,211,069 for the year. Our centennial was the focus of particularly intense involvement by trustees, advisors, and other close friends of the Society. A Trustee and Advisor Centennial Fund was established and attracted new commitments from our inner family, including a charitable remainder trust from Mr. and Mrs. Charles Dana, capital and other contributions from Mr. and Mrs. Robert G. Goelet, and many of the gifts mentioned below. Trustee Enid Haupt, as often before, has inspired us with a special centennial gift. Others, including Con Edison and The New York Times Company Foundation, provided centennial sponsorship.

The annual members meeting at Avery Fisher Hall on April 24 featured period dress, historical decor and graphics, and John Denver on stage. The Centennial Dinner afterwards, chaired by Executive Committee Chairman David Schiff, was devoted to the "founding families." On May 15, the popular Explorer's Party at Central Park Wildlife Center, chaired by Peri Clark, drew some 800 people. And finally, the Centennial Celebration at the Bronx Zoo on June 1, with Mr. and Mrs. John Irwin II and Mr. and Mrs. Robert Wood Johnson IV as co-chairmen, Mrs. Vincent Astor and Laurance S. Rockefeller as honorary chairmen, and Julian H.

Robertson, Jr. as corporate chairman, was attended by 800 people and raised \$1.2 million. These and a host of other centennial events are documented on pages 46-51 of this report.

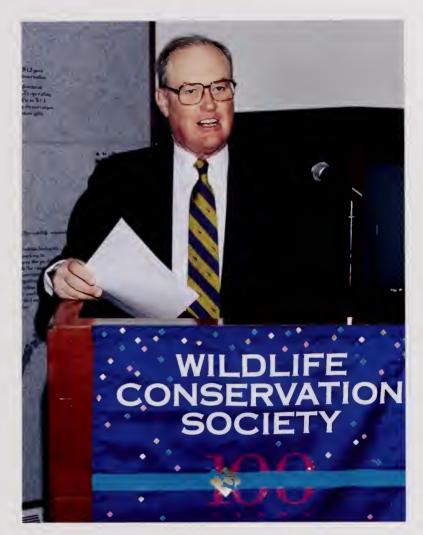
Once again, The Wallace Fund, deriving from funds established by Readers Digest founders DeWitt and Lila Acheson Wallace, led the way in overall contributions, with grants for World of Birds renewal projects, renovation of Administration East, Bronx Zoo infrastructure and Guest Services improvements, mammal exhibition enhancements, and Central Park Wildlife Center additions. Another significant general Society donation was provided by Trustee Julian H. Robertson, Jr. The Society's Wildlife Survival Center on St. Catherines Island, Georgia, was once again supported by the Edward John Noble Foundation, thanks to Trustee Frank Y. Larkin and Advisor Bradford D. Smith.

For the first time the Walt Disney Company Foundation supported the Society's international program, particularly our work with megavertebrates and other fauna in Kenya, Tanzania, Congo Republic, Zaire, Rwanda, Central African Republic, and Peru. Trustee Edith McBean Newberry gave to projects in Rwanda and Venezuela as well as wildlife health, and the Robert W. Johnson 1962 Charitable Trust generously backed John and Terese Hart in Zaire and our flooded forest work in Brazil. The Liz Claiborne/Art Ortenberg Foundation remained indispensable to our field scientists in Kenya, Papua New Guinea, Laos, and Bolivia.

Environmental education at the Bronx Zoo and Aquarium for Wildlife Conservation received important support from many sources. The Homeland Foundation provided additional funds for the Chauncey Stillman Chair in Wildlife Education, the Charles Zarkin Memorial Fund gave to teacher training, and Mr. and Mrs. Jack Rudin and the Samuel and May Rudin Foundation provided funds for teacher training packs. The Aquarium ran the Marine Teens program with backing from the Altman Foundation.

Wildlife Health Sciences benefitted from several major gifts, including Trustee Dr. Judith P. Sulzberger's endowment toward the Chair in Wildlife Health. She also gave to the Field Veterinary Program, as did The Schiff Family and Caroline Sidnam and Pamela Thye. Major bequests, for a variety of designations, were received from G. Eustis Paine, Doris Duke, Margarita V. Delacorte, F. Marion Davis, and Marjorie G. Bennett.

Volunteer leadership actively engaged in Society programs through events and giving, and also through participation in several key WCS committees: the Aquarium Marketing and Support Committee chaired by Craig Taylor, the Business Committee chaired by S.I. Ibrahim, the Centennial Committee chaired by Dailey Pattee, the Conservation Committee chaired by John Pierrepont, the Education and Exhibition Committee chaired by Anthony D. Marshall, the Marketing and Communications Committee chaired by John Elliott, Jr., the Wildlife Health and Sciences Committee chaired by Mrs. Joseph A. Thomas, the National Wildlife Crisis Campaign Leadership Committee chaired by Dailey Pattee, the Conservation Council chaired by Mrs. David Y. Howe and



HOWARD PHIPPS, JR.

CHAIRMAN OF THE BOARD OF TRUSTEES

Charles Howard, and the Northern California Council chaired by John Goldman and Helen Spalding.

Leaving the board of trustees were John Chancellor, whose media skills have so often benefitted the Society, and Stephen Friedman, a great champion of conservation. Also gone are advisors Peter C.R. Huang, Mrs. John W. Little, C. Walter Nichols III, and Edmund P. Moulton, all of whose efforts are deeply appreciated.

Both boards have been strengthened with the addition of new members. Moving from the board of advisors to the board of trustees are John Goldman, Mrs. Roman Martinez IV, Helen Spalding, Craig Taylor, and Ann Unterberg. James M. Large, Jr., Chief Executive Officer of Dime Bancorp. Inc. was also elected trustee. Our new advisors are Mrs. Harry V. Keefe, head of Passepartout, Inc.; Caroline Sidnam and Pamela Thye, whose support of wildlife health sciences at the Society carry on the tradition of their mother, Shirley Katzenbach; Alan N. Weeden, who co-chaired the Society's Centennial Lecture Series; and Charles Howard, co-chairman of the Society's Conservation Council.

Our gratitude is extended to all those cited here and to the many millions more who continue to help the Wildlife Conservation Society grow after 100 years of service.

On April 26, 1995, the Wildlife Conservation Society became 100 years old. Celebrations began

with a high-spirited Centennial Meeting at Avery Fisher Hall and a series of lectures, continuing through the year, by six eminent scientists in the conservation vanguard. Centennial events will carry on into 1996 at each of our New York institutions. Overseas, our commitment to saving wildlife around the world will be celebrated at the foot of Mount Kilimanjaro in Kenya's WCS-aided Amboseli National Park.

The centennial has been distinguished by the appearance of Saving Wildlife: A Century of Conservation in bookstores throughout the U.S. This elegant, carefully annotated book, published by Harry N. Abrams, is a remarkable pictorial and written record of the Society's

history, with essays, letters, speeches, and reports on the conservation issues of the day by leading Society figures, from William Hornaday and William Beebe to George Schaller. In its April 1995 issue, the Society's magazine, Wildlife Conservation, provided a capsule history that appealed to an even broader audience than we expected.

These evocative publications trace the evolution of programs in conservation, education, and recreation that have grown into major initiatives on five continents, across the country, and throughout the metropolitan New York area. Trustees and staff seem to have repeatedly reinvented the Society to deal with a changing City and a changing world. Yet, through all 100 years, we have sustained an unswerving commitment to future generations. Our three-part mission—"To sustain biological diversity, To teach ecology, To inspire care"—is a special pledge to our children, and to the next 100 years.

"To sustain biological diversity" is a fuller, necessarily more complicated way of saying "To save wildlife," the Society's basic task. Diverse species and interrelationships are essential to the life of the planet. As diversity is diminished in nature—by ax and plough, by development and pollution, by human overpopulation and overuse—so are the survival chances of any given species, including the human one. To save diversity, the Society itself has become more diverse. Putting a fence around animals to protect them is no longer sufficient, if it ever was.

Our scientists in the field—working in about 50 countries at any given time—study the ecological requirements of wildlife and

the needs and aspirations of local people; they devise long-term conservation strategies and stick around to help carry them out; they enlist and train conservation scientists in their own countries and engage the support and awareness of local communities and national agencies. It's a complicated task, but one that the Society's multidisciplinary approach is uniquely qualified to take on. The result is more than 110 wildlife parks and reserves established or maintained with Society help around the world and major regional initiatives on five continents, including such key areas as the biotic corridor through Central America, the dense forests of equatorial Africa and southeast Asia, the flooded forest of Brazil, and the rugged coastline of Patagonia.

As we strive to save wildlife directly in nature, our own zoos and aquarium are no less absorbed in sustaining biological diversity. The propagation of endangered species remains an essential task, as we battle to buy time for creatures facing extinction, working closely with the American Association of Zoos and Aquariums (AZA) and zoos around the world. At the same time, we are leading the evolution that is starting to transform zoos and aquariums from living museums into conservation organizations active beyond their boundary fences. These usually urban institutions have a large and largely untapped capacity to help.

The audience we serve, representing the great cultural diversity of New York City and its people, is critically connected with our commitment to in sustaining biological diversity. Diversity is in both cases a strength to be nurtured and celebrated, and our zoos and aquarium provide a more than metaphorical meeting ground for nature and human society. These sanctuaries are vital to the City's fullness of life, and to fulfilling the City's promise to its own citizens. But they are also essential, as living links with nature, in promoting and sustaining our awareness of the larger world in which we live.

Which describes our second imperative, "To teach ecology." Who will wish to save wildlife? Why? One survey after another reveals that U.S. science and environmental education efforts are poorly taught and shamefully behind those of many other countries. Outside zoos and aquariums, moreover, children have little chance of adding life to ideas of nature otherwise composed of paper and pixels. Part of the answer is such non-traditional curricula as Wildlife Inquiry through Zoo Education (WIZE) and Pablo Python Looks at Animals, both developed at the Bronx Zoo and now used nationwide and as far away as China.

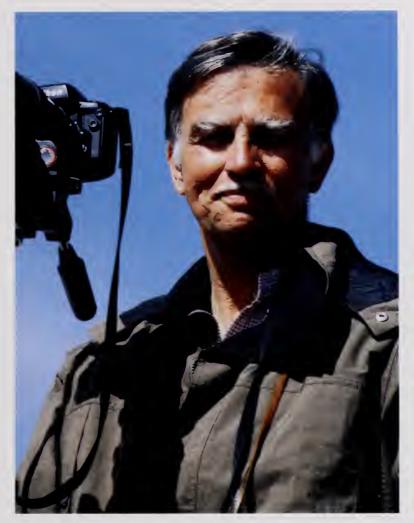
WCS's challenge for the future is clear. It is to use our living collections and field programs to teach options and the consequences of actions, to achieve the necessary balance between economic and environmental aims, and, especially, to distinguish the difference between actions which are irrevocable and those which are not. Unhappily, our national need has become shockingly apparent.

This year has seen a stunning retreat from the nation's once bright international leadership in wildlife protection. The new Congress has voiced almost overwhelming opposition to renewal of the Endangered Species Act (ESA), which has frightening international implications. The loss of the ESA, or support for enforcing it, would have a devastating impact on the future of nature and wildlife throughout the world.

The nation's education agenda must make environmental information and decision-making criteria priorities, as necessary to graduation and a comprehensive education as English, social studies, and mathematics. WCS has a big head start on this agenda—it is a powerful direction for our future.

Finally, we must "inspire care." The Society's most powerful tools in this effort are its great live animal exhibits. They recognize and celebrate the continuity of life, from horsefly to human, and make natural wonders a part of the City's fabric of life.

Nationwide, however, competition for the public's attention is growing. Multi-billion dollar amusement parks are multiplying. Like it or not, zoos and aquariums are being drawn into a competition which they can afford neither to enter nor to ignore. The future of our work requires that we more strongly define our unique "playing field." We are not purveyors of water rides or artificial creatures of mechanical immortality, but caretakers of vanishing bison and condors, black-footed ferrets and Arabian oryx, Guam kingfishers, and Chinese crocodiles, desert pupfish, Lake Victoria cichlids, and snow leopards. Like libraries, museums, national parks, and wildlife reserves, we provide long-term services to society. We cannot abandon or store our collections in moments of unprofitability. Institutions responsible for living creatures have no choice but to provide continuity, and our challenge is to find com-



WILLIAM CONWAY

PRESIDENT AND GENERAL DIRECTOR

pelling new ways to develop and promote wildlife's beauty, importance, and value. This is what it means to inspire care.

Restating our purpose in this centennial year has been accompanied by the rededication of our trustees and advisors. It is appropriate to mention here the outstanding leadership over the past 20 years of our chairman, Howard Phipps, Jr., and to thank him and members of his family for spearheading the Trustees and Advisors Centennial Fund with a major gift. His example has inspired a renewed commitment to saving wildlife and serving the people of New York City through the Society, its international program, and its zoos and aquarium.

In this Report there is much mention of wildlife and science, education and children—especially children. The Society's zoos and aquarium introduce our young people to another world. They clothe the City's steel and concrete with the diversity and beauty of life, lace it with facts and opportunities for exploration, offer contacts with the ecological systems on which human lives depend. Ultimately, our children will be responsible for the indispensable resources of our nation and the world. Some might argue that a program with such a strong commitment to children is not sufficiently serious, but it seems a good place to begin our second century.

PEOPLE AND WILDLIFE IN NEW YORK

Founded in 1895, the Wildlife Conservation Society operates the world's largest system of urban wildlife sanctuaries. In this centennial year, more than 4.1 million people from around the country, the world, and the New York metropolitan area visited the Bronx Zoo, the Aquarium for Wildlife Conservation, and the Central Park, Queens, and Prospect Park wildlife centers.







One of my earliest memories is of the day my grandfather took my sister and me to the Bronx Zoo, where we met the great William Beebe. I remember gazing up at a gracious man in a white lab coat and somehow knowing he was doing important things. Now my daughter Annie and thousands of other children experience the majesty and mystery of the animals that enhance their fantasy worlds. Thanks to the Wildlife Conservation Society, these animals will be not just images in a book or on a computer screen, but will continue to be the living, breathing, wondrous creatures that add so richly to our collective soul.

GLENN CLOSE

STAGE AND SCREEN ACTRESS, RECENT STAR OF THE BROADWAY HIT SUNSET BOULEVARD.

BRONX ZOO/WILDLIFE CONSERVATION PARK

THE WILDLIFE Conservation Society's flagship and headquarters, the Bronx Zoo, opened in 1899 and has since welcomed over 200 million visitors. With more than 4,000 animals, many of them representing endangered species and habitats, the Zoo is a center for environmental education and awareness, and headquarters for conservation action at home and abroad.

Mammals

AS THE summer season of our centennial year approached, preparations were made to bring all five of the Zoo's baby gorillas to the public at the Great Apes House.

They included twin male gorillas born on August 8, 1994, to Pattycake, originally of the old Central Park Zoo, and Timmy, our visitor from the Cleveland Metrozoo. Timmy has now sired four babies since arriving from Cleveland in 1991 as part of the Gorilla Species Survival Plan (SSP), one of 89 cooperative interzoo breeding programs sponsored by the American Association of Zoos and Aquariums (AZA). Named Ngoma and Tambo, thanks to a public contest sponsored by the New York Daily News, the twins joined three female gorillas born within the same six monthsan unmatched record of success in zoo breeding for this endangered species.

This population explosion was accompanied by the completion of plans for the Congo Gorilla Forest, which received funding from the Mayor's Office, the New York City Council, the Bronx Borough President's office, and major gifts during the past year from the Charles Hayden Foundation, the Bodman Foundation, the Stern Family Foundation, and George Hecht. Devoted to the equatorial African forest world of gorillas, okapi, mandrills, and other species, the 6.5-acre facility will be a model for interpreting living exhibits into the 21st century, connecting field conservation, cooperative breeding, and environmental education in a way that actively involves zoogoers.

In September 1994 the Zoo received a





PAGES 8-9: THE BRONX ZOO'S FIVE LOWLAND GORILLA BABIES DEBUTED ON JULY 15, 1995. TOP: A NEW HILLSIDE HABITAT WAS OPENED FOR ENDANGERED MEXICAN WOLVES. ABOVE: DAVID T. SCHIFF IS CHAIRMAN OF THE EXECUTIVE COMMITTEE OF THE BOARD OF TRUSTEES.

pair of extremely rare Mexican wolves, a subspecies of the gray wolf that may be extinct in nature. While the gray wolf is holding its own in some parts of North America, the Mexican wolf has virtually disappeared except for the 130 or so that survive in zoos. They are part of a Species Survival Plan (SSP) that involves 24 zoos, the U.S. Fish and Wildlife Service (USFWS), and the Mexican government. The USFWS plans to reintroduce animals raised in the program in protected sites within their historic range.

Several new species were introduced in JungleWorld, which is now ten years old. Binturongs from Southeast Asia and Matschie's tree kangaroos from New Guinea, both arboreal animals, were added in the Scrub Forest area along with five butterfly species. If the butterfly experiment works, there will be additional exotic butterfly introductions in JungleWorld.

Introduced last year, a safer "protected contact" method of managing elephants is proving highly successful. The four female elephants at Wild Asia are now handled exclusively this way by keeper staff, and the two elephants at Zoo Center, 42-yearold Tus and three-year-old Samuel R., are making significant progress. In this innovative program, based on a system of rewards, the dangers of working in close contact with these powerful, not always predictable animals are greatly reduced.

Birds

THE BIGGEST challenge for the Bird Department last year came in February, when the DeJur Aviary collapsed under the weight of a heavy blanket of snow blown by storm winds. Many of the colonial seabirds in the 1899 structure, including all the cormorants and penguins, remained and were unhurt, but 33 gulls and terns of South America, none of them belonging to endangered species, flew out and were blown south by high winds. Keepers spent the cold, wet Sunday transferring the remaining birds to safer quarters. Despite extensive local news coverage and thousands of calls from a concerned public to report sightings, only two birds were recovered.

The outpouring of public support was astounding. Planning for a new Aviary began almost immediately, and pledges and contributions were received from the original donor, the Harry DeJur Foundation,



the F. Marion Davis Estate, and scores of individuals. Schoolchildren at PS205 in the Bronx collected and contributed more than \$855 in pennies. Reconstruction of the 96-year-old flying cage, one of the glories of the early Zoo, is scheduled to begin in the fall, with the goal of a spring opening.

Birds of paradise have been a Society priority since 1928, when then Curator of Birds Lee Crandall made his great expedition to New Guinea. In 1982, current Chairman Donald Bruning began the Society's productive conservation link with the people and government agencies of Papua New Guinea, leading to the creation of the Research and Conservation Foundation and Crater Mountain Wildlife Management Area. In 1988 the department began to breed red and lesser birds of paradise, forging a remarkable record of success based on careful study of these species' unique mating behavior. All chicks had been hand-reared until this spring, when a female lesser bird of paradise successfully raised two chicks herself. The breeding program has now expanded beyond the Bronx to seven other institutions in a cooperative effort. A new exhibit for the lesser birds of paradise was scheduled to open at the World of Birds in late July.

Other changes at the World of Birds include the renovated habitat for African weaverbirds, which opened last August. The arid scrub landscape features visitor-controlled touch screens, which activate cameras providing close-up views of birds in action, weaving their elaborate nests. White-throated bee-eaters, sand-grouse, and Kittlitz's sandplovers are included. Both improvements, for the birds of paradise and the weaverbirds, were made through the generosity of The Wallace Fund.

JungleWorld and the Pheasant Aviary are the new homes for a breeding group of green junglefowl, which are as rare in their native Java as they are in captivity. Since hatchings have already been profuse, a studbook will be established and collaborations with other zoos will be developed, starting with the Society's Central Park Wildlife Center.

Long-term efforts to generate a conservation program for colonial waterbirds, which are in jeopardy throughout the world, have resulted in the creation of a propagation and management facility for storks near the John Pierrepont Wildfowl Marsh, thanks to the generosity of the Jeniam Clarkson Foundation. The public are able to view our activities as well as the behavior of the storks. Marabou storks are being studied first with the goal of applying the knowledge gained to their highly endangered relatives, the greater and lesser adjutant storks.

Reptiles and Amphibians

THE 96-YEAR-OLD Reptile House received special attention in preparation for the Society's centennial year. Added were exhibits for an American alligator nest, for Mehrten's water monitors and Australian giant snake-necked turtles, and for Mexican axolotls, which are salamanders from Lake Xochimilco. A 14-foot king cobra, hatched at the Bronx Zoo in 1978, returned from the Baltimore Zoo to take up residency in the enclosure in which he started life. The Reptile House nursery was filled throughout the year with baby broad-nosed caimans, Chinese alligators, Malaysian giant

and painted batagur terrapins, St. Hilar's sidenecks from Argentina, Suriname toads, New Guinea amethystine pythons, Namaqualand speckled padlopers (the world's smallest tortoise), African hingebacks, and endangered Florida indigo snakes. Continuing its great popularity, the Reptile House drew about half of the Zoo's two million visitors.

The department participated in four Species Survival Plans—for Chinese alligators, radiated tortoises, Dumeril's ground boas, and Cuban crocodiles—with Curator John Behler and Collection Manager Bill Holmstrom serving as coordinators for the first two named. Thirty radiated tortoises hatched at St. Catherines Wildlife Survival Center during the year, and two elderly Chinese alligators, which were imported from the Moscow Zoo and placed on loan to the Houston Zoo, bred. Their nine offspring added important new genes to the captive North American population, which now has nine founders.

Outside the Zoo, staff has worked with the National Parks Service to restore reptiles in the Gateway National Recreation Area. At Floyd Bennett Field in Long Island, reintroduced eastern box turtles are reported to be reproducing well. And at Breezy Point at the end of Coney Island and Sandy Hook in New Jersey, eastern hognosed snakes originally hatched at the Reptile House continue to thrive. Guidance was also provided to local and state agencies, as well as non-governmental groups on issues ranging from exotic snakebites to Long Island endangered mud turtles and tiger salamanders.

Farther afield, John Behler traveled to Kirindy Forest in western Madagascar for additional studies of flat-tailed tortoises. Five confiscated specimens from Tsimbazaza Zoo were sent to the U.S. to bolster breeding colonies on St. Catherines Island and at the Knoxville Zoo. For the fourth year, Bill Holmstrom joined Latin American Program Officer John Thorbjarnarson in Venezuela to work on the giant anaconda ecology study, which has now provided information on some 400 snakes.





WHEN THE DEJUR
AVIARY COLLAPSED
IN A WINTER STORM
(ABOVE), CHILDREN AT
P.S.205 COLLECTED \$855
IN PENNIES (OPPOSITE
PAGE) TO HELP REBUILD
THE GREAT CAGE, HOME
TO INCA TERNS (LEFT)
AND OTHER COLONIAL
SOUTH AMERICAN
SEABIRDS.

WILDLIFE SURVIVAL CENTER

THE SOCIETY was among the first institutions to insist on the need to breed curassows, a need that few aviculturists envisioned in 1980, when the first of these turkey-like birds arrived at the Center. Members of the family Cracidae, curassows are threatened throughout their Central and South American range. They are a favorite meal for indigenous peoples and workers relocated to rain forests to work mines or build roads. Curassow habitat is being destroyed by slash-and-burn farming and flooding from dam projects.

Between 1980 and 1994, 71 curassows of five species hatched at the Center. Two additional species hatched last year—the wattled curassow and the northern helmeted curassow—both identified by the Cracid Taxon Advisory Group as target species for the North American captive population.

Peak reproduction was achieved by

three pairs of hornbills—wreathed, wrinkled, and Blyth's—with six chicks hatched. By year's end only the two wrinkled chicks had fledged, and the staff was still anticipating the first awkward attempts at flight by the other four upon emergence from their nests. This success rivals the best by any hornbill breeding program. Associate Curator of Birds Sharon Reilly is coordinating a nationwide study of hornbill nestbox environments, hoping to encourage even greater success in the laborious process.

Also prospering were the gopher tortoises that had been relocated from mainland Georgia to the north end of St. Catherines Island in spring 1994. Senior Zoologist Jeff Spratt and Curator of Herpetology John Behler found five yearlings during a survey of the population, along with some gravid females and clutches of eggs. This first opportunity to monitor a translocated population of gopher tortois-



I love all four of the great U.S. conservation organizations that have programs around the world. They complement one another in their immensely valuable work, with the Society providing something special both through its long-term presence in conservation field projects and through its great experience at the Bronx Zoo and the Aquarium. And besides, any organization that includes Charlie Munn can't be all bad.

MURRAY GELL-MANN

MURRAY GELL-MANN WON THE 1969 NOBEL PRIZE IN PHYSICS FOR HIS WORK WITH SUBATOMIC PARTICLES, A FOUNDER OF THE WORLD RESOURCES INSTITUTE OF THE SANTA FE INSTITUTE AND A DIRECTOR OF THE JOHN D. AND CATHERINE T. MACARTHUR FOUNDATION, HE IS ALSO A TRUSTEE OF THE WILDLIFE CONSERVATION SOCIETY AND HAS TRAVELED WITH WSC RESEARCH ZOOLOGIST CHARLES MUNN IN PERU.

es in Georgia should facilitate future translocations of endangered tortoise species.

Research on the Center's three groups of free-ranging primates—ruffed lemurs, ring-tailed lemurs, and lion-tailed macaques—continued to provide information about social, feeding, and breeding behaviors that will be useful in reintroducing these species in nature. In fact, the feasibility of reintroducing these lemur species is under consideration by the Prosimian Taxon Advisory Group and the Madagascar Faunal Interest Group, and the Center's animals, because of their experience in the wilds of St. Catherines, are prime candidates for repatriation.

Reproduction rates neared peak levels in several of the Center's flocks, herds, and troops. Births and hatchings included: 30 radiated tortoises, 2 wattled cranes, 1 maleo, 5 red-fronted macaws, 3 caninde macaws, 5 yellow-shouldered Amazons, 7 ring-tailed lemurs, 1 lion-tailed macaque, 2 bonteboks, 8 Nile lechwes, 10 Jackson's hartebeests, and 2 slender-horned gazelles, for a total of 84 in fiscal year 1995.

AQUARIUM FOR WILDLIFE CONSERVATION

DOLPHIN MONTH marked the end of the fiscal year at the Aquarium. It began on June 1 with the opening of the enlarged, improved, reoriented Aquatheater, funded by the City of New York through the efforts of the Brooklyn delegation of the City Council. Stars of the spectacular new educational shows were three Atlantic bottlenose dolphins Jeri, Presley, and Tab, andCalifornia sea lions Jaws, Lenny, and Fonzie. Senior Trainer Martha Hiatt spent six months over the winter working with the dolphins in California in preparation for the season. Opening ceremonies brought out government and Society leaders led by City Councilman Howard Lasher, Commissioner of Parks and Recreation Henry Stern, representing Mayor Giuliani, Society Chairman Howard Phipps, Jr., and Aquarium Director Louis Garibaldi.

Closed for renovations in fall 1993, the reopened Aquatheater now seats 1,600





ASSOCIATE CURATOR SHARON REILLY FEEDS NILE LECHWE CALVES (TOP) AT THE WILDLIFE SURVIVAL CENTER, WHICH TRUSTEE VICE-PRESIDENT FRANK Y. LARKIN (ABOVE) WAS INSTRUMENTAL IN ESTABLISHING.

spectators, up from 600, and features a new sound system, an expanded presentation deck, and an enlarged 200,000-gallon pool. The stadium now faces south instead of north so that viewers see the show against the background of Sea Cliffs and, in the distance, the Atlantic Ocean. Total attendance for June was 110,127, up 19.5 percent over last year, and visitors were treated to many fascinating reminders of the Society's Centennial as well as the new facilities.

Another opening, on April 29, introduced "Fish That Go Zap!," an exhibit in Discovery Cove on electric fishes. Provided with major funding by Con Edison and developed under the direction of Deputy Director Paul Boyle and Graphics Manager Paul Heyer, "Zap!" examines how fish use electricity to defend, hunt, feed, communicate, and establish territory. Interactive devices and comicbook-style graphics describe hope these unique fishes use electricity, and how all animals depend on similar, but much weaker, biological electricity for survival. Visitors can measure their own electric activity, listen to knifefish navigation pulses, and watch as a six-foot electric eel stuns its prey with 650-volt jolts. Dr. Coates' Electric Eel Lab shows the fascinating research of former Aquarium curator and later director Christopher Coates, who began his fascinating work on electric fishes in the 1930s.

Success in the beluga whale breeding program continued with the birth of Maris at 3:45 a.m. on July 28, 1994. Sired by Winston, the female calf is the second offspring for 14-year-old Natasha, and the fourth overall for the Aquarium since 1991. "Maris" (meaning "of the sea" in Latin), was the grand prize entry of Kristine Fiore of Mastic, New York, one of 17,000 names received in the contest sponsored by *New York Newsday*, FujiFilm, New York One News, and the Wildlife Conservation Society.

Three orphaned Pacific walruses brought to the Aquarium last year from Alaska by Curator Paul Sieswerda, Director of Training Kevin Walsh, Senior Veterinarian, and Lab Manager Catherine McClave, found a new home in Sea Cliffs, joining resident walruses Nuka and Tiipaq in the spring. Named Ayveq (Walrus), Uupa (Sea Peach), and Kulusiq (Iceberg), as suggested by Yupik children in the village of Gambell on St. Lawrence Island near the Bering Strait, the three young walruses have acclimated well to their new companions and surroundings. As part of this project, the Aquarium's Education Department initiated a correspondence be-



AOUARIUM DIRECTOR OF TRAINING KEVIN WALSH AND TIIPAQ THE WALRUS COMPARE MUSTACHES (ABOVE). DOLPHINS PERFORM AT THE EXPANDED AQUATHEATER (RIGHT).

tween schools in Brooklyn and Gambell (see p. 29).

In breeding programs for endangered Lake Victoria cichlids of Africa and threatened North American desert fishes, five species extinct in nature and twelve others listed as either endangered or threatened have now been bred at the Aquarium's Osborn Laboratories of Marine Sciences. Curator of Freshwater Fishes Paul Loiselle conducted research in Africa, Madagascar, and Mexico last year, and the fishes he collected there have adapted well to life at OLMS. Several species are seen by the public in Conservation Hall, and it is hoped that some can be reintroduced in their natural habitats in the future.

The new Critical Ocean Wildlife Recovery Initiative (COWRI)—developed by Paul Boyle, Louis Garibaldi, Society Policy Analyst Dorene Bolze, and Science Resource Center Director Fred Koontz-focuses on three program areas: basic and

applied research, public awareness, and marine policy. COWRI redirects the work of the Osborn Labs to critically affected aquatic species and habitats. With generous support from Trustee Edith McBean Newberry, the Aquarium established a coral culture laboratory in the Labs to

study the effects of temperature, salinity, light, pollution, and nutrients on coral growth and reproduction. These studies, under Curator of Marine Fishes and Invertebrates Dennis Thoney, are closely linked with research being conducted by Society field scientists in Belize, Kenya, and Bermuda. New coral colonies were collected in Bimini during the year for propagation and controlled laboratory studies by Aquarium, other WCS, and outside collaborating scientists.

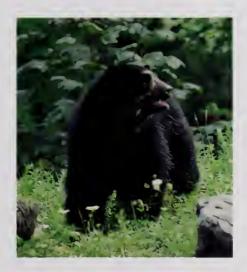
CENTRAL PARK WILDLIFE CENTER

WITH 862,665 visitors, the Center reached its highest attendance since the reopening year of 1988-89. This represents an increase of 12 percent over last year. News reports on Gus the polar bear certainly helped (see below), but so did the advent of the Society's centennial year in April, which included special events and celebratory decor.

After seven years of operation, the Center focuses increasingly on endangered species management and propagation under Director Dan Wharton. The only two pairs of black lion tamarins in North America arrived in May as part of an American Association of Zoos and Aquariums (AZA) breeding program. The species was thought to be extinct in about 1905, but was discovered again in 1970, and a captive breeding program was begun in Brazil. About 100 animals are currently maintained at the Rio de Janeiro Primate Center and the Sao Paulo Zoo in Brazil and at the Jersey Wildlife Preservation Trust in Great Britain. There are about 900 black lion tamarins left in nature.

Other programs involving endangered species proliferated. Red panda cubs Buddy and Sally were the first of this species to be born at the Center. African pygmy geese reproduced for the first time here, as part of a cooperative husbandry research project with the Bronx Zoo, the only other North American zoo to breed them. Various rare poison arrow frogs continued to breed, and the blue poison dart frog program may become an AZA Species Survival Plan (SSP). Keepers were working with the Bronx Zoo-based SSP to develop management of Mauritius pink pigeons in a mixed species aviary, and green jungle fowl were scheduled to enter the Tropic Zone. Taveta golden weavers and Sunda parrot finches were also introduced in the Tropic Zone.

The adventures of Gus the restless polar bear were followed throughout the year by local and national press and TV. People magazine even named him one of the top 25 "people" of 1994. Much has been done for Gus and his companions, Ida and Lily, by the Center's state-of-the-art behavioral enrichment program, which has been active for several species at the Center and the Bronx Zoo. At the polar bear habitat, a variety of manipulable objects ("toys") are offered at varying intervals. A digging pit has been constructed in the exhibit, and ice machines provide two tons of "snowfall" each day. Food items are offered in hidden areas throughout the day to encourage foraging, and the bears go fishing regularly now that their pool also functions as a trout pond.





SPECTACLED BEARS FROM SOUTH AMERICA (TOP) WERE INTRODUCED IN QUEENS, AND BLACK LION TAMARINS (ABOVE IN CENTRAL PARK, BOTH SPECIES ARE ENDANGERED.

QUEENS WILDLIFE CENTER

TWO SOUTH American species joined the Center's until now exclusively North American wildlife population. Spectacled bears, which range the Andes Mountains from western Venezuela to Bolivia, are the first Species Survival Plan (SSP) animals in Queens, and they will eventually participate in a cooperative breeding program for the species under the aegis of the American Association of Zoos and Aquariums (AZA).

Six brilliant red scarlet ibises from the tropical coasts of South America were added to the geodesic Aviary, in an area that can be closed off in colder months. The birds will be moved indoors for the winter.

American bison are the Center's signa-

ture species, and the annual Bison Bonanza Celebration in June had special meaning in this the Society's centennial year. A mock bison scale was constructed in the bisons' meadow to compare the weight of one animal to ordinary items such as bagels, pizzas, and bowling balls. In addition, a huge balance beam was installed so that children might visualize and experience how many of them would equal the weight of a bison (34 in the case of second-graders).

Flushing Meadow Phil, our local prairie dog celebrity, now occupies a suite with Corona Kate. Together they predicted a short winter at our annual Groundhogs' Day event. Queens Borough President Claire Schulman, Commissioner of Parks and Recreation Henry Stern, much press, and many visitors were in attendance.

The horticulture department introduced a European method of controlling erosion in the Aviary by using coconut matting to stabilize and allow aquatic plants to become established. The result is more natural looking habitats that attract wildlife.

PROSPECT PARK WILDLIFE CENTER

DURING THE Center's first full year of operation, attendance reached 255,000. A new exhibition opened for red pandas, and changes to another habitat brought blacknecked swans to the marsh pond. Notable births were recorded for capybara, wallabies, rock hyrax, red-eyed tree frogs, zebra mice, and Madagascan day geckos. Following the collapse of the DeJur Aviary at the Bronx Zoo, assistance was provided to the Bronx Bird Department. Animal Assistant Supervisor Joy Gonzalez found herself temporarily housing and administering to nine Magellanic penguins she once cared for in the Bronx.

Behavioral and spatial studies were conducted with Hamadryas baboons by Senior Keeper David Autry and with cotton-headed tamarins by Senior Keeper Marian Glick-Baur. Returning from the Reptile and Amphibian TAG meetings, Animal Supervisor Tom Probst provided the Center with the opportunity to partici-



pate in the Wyoming Toad Project, which is devoted to the estimated 100 adults of the species left in the wild. The Center will receive toadlets to raise for future release.

Director Lewis Greene traveled in December to Panama, where the Society was one of the sponsors for two conservation workshops concerning Panamanian wildlife, especially the Baird's tapir. Later in the year Lewis was appointed by the Tapir TAG and the Rodent and Insectivore TAGs to develop a management plan for Baird's tapirs and capybara, respectively.

EXHIBITION AND GRAPHIC ARTS

TO CELEBRATE the Society's 100th birthday, its charter with the State of New York on April 26, 1895, a special centennial graphics program was created to be used at all five wildlife facilities in New York and other WCS venues. Colorful bunting was created to adorn buildings at the Bronx Zoo and Central Park Wildlife Center. Mileposts of 100 WCS accomplishments were produced and placed at each of the facilities, along with graphics kiosks telling the Society's story. Colorful banners declared "100 Years of Saving Wildlife" around the borders of the zoos and aquarium. These and many other elements were

part of the Centennial Annual Meeting at Avery Fisher Hall on April 24 and of a botanical and graphic display that adorned the Channel Garden in Rockefeller Center for the month of June.

With much of the funding in place from private sources and from the City, thanks to Mayor Rudolph Giuliani, City Council Speaker Peter Vallone, and Bronx Borough President Fernando Ferrer, the Bronx Zoo's planned Congo Gorilla Forest exhibition and education complex was scheduled for groundbreaking in October 1995. The lushly replicated 6.5-acre equatorial habitat will provide a breeding sanctuary for gorillas, okapi, Congo peacocks, and other endangered African species, an educational and teacher training center, and a vital link to WCS conservation work in Africa. Along the forest paths and from the innovative classrooms and hands-on galleries, visitors, students, and teachers will be involved in the animals' world and the effort to preserve that world.

Meanwhile, the department was involved in Africa itself, working out plans that have been proposed to the Kenyan government to create a visitor education center in place of the old animal orphanage in Nairobi. Assistant Director Lee Ehmke and Senior Exhibit Designer Susan

Chin were the point people in Nairobi, where local architects for the project are now being considered. Construction of another facility abroad was completed on Middle Caye, the atoll island owned by the Society in the Belize barrier reef. This gives the Society a base from which to conduct its conservation studies along the reef.

Two new exhibitions at the Bronx Zoo involved the erection of rustic wooden "blinds" with viewing slots for adults and children. In one, endangered Mexican wolves are seen in a forested hillside beyond a stream and described in graphics about their decimation, behavior, and predatory lifestyle. The other, occupied by Marabou storks in a spacious netted aviary, is a prototype in the development of breeding areas for more endangered storks. Elaborate exhibits were also completed for birds of paradise and weaverbirds in the World of Birds.

An even more challenging task is the recreation of the 96-year-old De Jur Aviary for Colonial Seabirds, which collapsed during a winter storm. The reconstructed aviary, slated to be underway in the fall, will have more flying space for the birds and new information stations for visitors to learn about conservation issues involving seabirds in South America.

PEOPLE AND WILDLIFE IN NEW YORK

Included in improved amenities for visitors to the Zoo were a large picnic area near the Kodiak bears, new ticket booths and more attractive entries to the parking lots, renovations at Zoo Terrace Restaurant, and a new woodland gift stand near the Mexican wolf exhibit.

The horticultural aspect of these and other projects entailed the planting of 18,000 plants around the Zoo during the

year. The beech woods around the American bison and the World of Birds were replanted with native New York shrubs and wildflowers which had disappeared from this area. Horticultural experiments in Wild Asia have reestablished rich stands of grass in exhibits, improving conditions for the animals and viewing for the public. Our first automated irrigation system was installed in South China Hills, for efficient water use in maintaining the forest and the exhibition. New efforts in organic pest control have brightened the future for many of the Zoo's hemlocks, which have

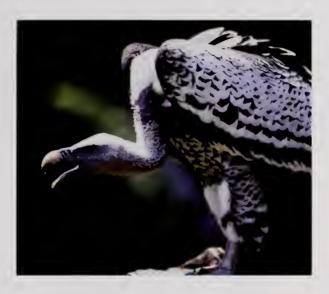
been suffering in recent years. Experiments with new organic herbicides were successful in animal areas.

WILDLIFE HEALTH SCIENCES

the Wildlife Health Center—WCS veterinarians and technicians cared for nearly 10,000 animals at six facilities in New York and Georgia and conducted research that reached as far as Argentina, Zaire, and Indonesia. Our most telling loss of the year came with the death in January of Bob Montana, who had been hospital supervisor for several years and a dedicated Society employee for more than 50 years.

Significant biotechnological advances occurred with the introduction of new techniques in endosurgery, which makes possible rapid diagnosis and treatment involving minimal postoperative stress and recovery time. A variety of endoscopic instruments, which require only a minor incision, were used on a wide range of proce-

dures, from spaying a bull frog to exploring the abdomen of a polar bear. Director and Chief Veterinarian Robert Cook worked closely with representatives of Olympus America, Inc., Ethicon Endo-Surgery, Inc., Valleylabs, Inc., and Ethicon, Inc. to secure the necessary equipment, supplies, and staff training for WCS veterinarians and technicians. Dr. Cook's position as Director of Wildlife Health Sciences



FOR THE SECOND SUMMER, THRONGS OF BRONX ZOO VISITORS ENJOYED "SKYHUNTERS" (OPPOSITE PAGE), FEATURING A RUPPELL'S GRIFFON VULTURE (ABOVE) AND OTHER RAPTORS. THE EXHIBITION AND GRAPHIC ARTS, EDUCATION, AND OPERATIONS DEPARTMENTS ALL WORKED ON THE POPULAR SHOW.

was partially endowed with a major gift from Trustee Dr. Judith Sulzberger.

Clinical Medicine

UNDER SENIOR Veterinarian for the Bronx Zoo Dr. Bonnie Raphael, twin baby low-land gorillas born to Pattycake on August 8, 1994, received intensive observation and care through the early months of their lives. In all, surrogate mother Caroline Atkinson raised five baby gorillas last year, and the veterinary staff, with the help of consulting pediatricians Dr. Joseph Levy and Dr. Stephen Schwartz, closely monitored their progress. Less fortunate was our seven-year-old female gorilla Lusi, who was diag-

nosed with cancer of the reproductive organs after exploratory surgery by Dr. Cook and consulting obstetrician Dr. Laurie Goldstein. On the advice of Memorial Sloan Kettering oncologists, chemotherapy was initiated, but Lusi succumbed to her disease a few short months later.

Dr. Paul Calle, Senior Veterinarian for the City Wildlife Centers and the Aquarium, received diplomate status in the Amer-

ican College of Zoo Medicine. He and staff successfully controlled recurring gastrointestinal infections in the Aquarium's three young walruses and followed Natasha, the beluga whale, through her second pregnancy and delivery of a healthy female calf.

Four black lion tamarins got through their intensive quarantine period, as stipulated by the Center for Disease Control, and are now settled in at the Central Park Wildlife Center. They are the first of their species to be managed in North America, and the Wildlife Health Center is one of a very few

zoo facilities that is approved by the Center for Disease Control to accept primates arriving from outside the United States.

Clinical Veterinarian Dr. Mark Stetter advanced ultrasound imaging technology, using it for the first time with fish and amphibians. His expertise in this area was made available through a training course he conducted for the American Association of Zoo Veterinarians and through a chapter in an upcoming veterinary text.

Our volunteer consultants in human and veterinary medicine, led by otolaryngologist Dr. Jim Grillo, had an active year. Dr. Nogah Haramati, Director of Musculoskeletal Radiology at Albert Einstein College of Medicine, worked with Senior Technicians Ivan Llanes-Aponte and Pamela Manning to develop refined techniques for using mammographic imaging on our smaller patients. Dr. Henry Godfrey of New York Medical College worked with Clinical Resident Dr. Barbara Mangold on a new rapid test for the diagnosis



of mycobacterial diseases such as tuberculosis. Results seem promising, and successful implementation of this test will result in earlier diagnosis and treatment.

Pathology

DEPARTMENT HEAD Dr. Tracey McNamara carried the word of zoo pathology far and wide, lecturing at the University of Wisconsin, Kansas State University, the University of North Carolina, and the New York State College of Veterinary Medicine (Cornell University). She presented a paper at the Pathology of Reptiles and Amphibians Symposium in Holland and three papers at the annual conference of the American Association of Zoo Veterinarians. Dr. McNamara, a member of the Zoological Consortium of the C.L. Davis Foundation for the advancement of veterinary and comparative pathology, was also elected to its National Advisory Board.

Independently, the foundation selected the Society's Pathology Department as its East Coast independent study site, housing an extensive and historical collection of slides at the Wildlife Health Center. One of only three such sites in the country, the department makes the material available to outside researcher and for its own pathology training programs. Pathology residen-



DR. WILLIAM KARESH EXAMINES AN
IMMOBILIZED FLEPHANT IN CAMEROON (TOP).
MRS. JOSEPH A. THOMAS (ABOVE) HEADS THE
WILDLIFE HEALTH AND SCIENCES COMMITTEE.

cies were filled by Dr. Michael Linn, completing his first year, and Dr. Stephen Raverty, beginning his.

The department also launched a telepathology project, the first zoo to do so, with the New York State College of Veterinary Medicine. This new technology makes it possible to exchange with veterinarians at Cornell and conduct consultations on digital images of slides. Plans are being discussed to expand the program to include training sessions for veterinary students using zoo material.

Nutrition

AS HEAD of one of the few zoo-based comparative wildlife nutrition programs, Dr. Ellen Dierenfeld was active nationally and internationally. In the U.S. she was named a professor in the Department of Animal Science at Cornell University and served as program chair for the initial Nutrition Advisory Group (NAG) specialty conference of the American Association of Zoos and Aquariums (AZA). In Dresden, Germany, she presented the opening address on browsing rhinoceros nutrition at the European Zoo Veterinary Conference. Dr. Dierenfeld is nutrition advisor for the rhinoceros, elephant, cheetah, tiger, gorilla, and Bali mynah Species Survival Plans (SSPs) of the AZA.

Under Laboratory Supervisor Marianne Fitzpatrick, the department carried out investigations of seasonal changes in temperate browse composition, nutrients in insects and insectivores, and fruit bat digestive physiology. These and other collaborative studies of small ungulate digestion, leaf-eating monkey feeding ecology, and

aye-aye food intake were completed with the help of 13 volunteers logging over 800 hours and Mount St. Vincent student Dayna Barker. Nationally, we assisted in assessing the vitamin and mineral status of elephants and rhinos, Alaskan pinnipeds, raptors, and gopher tortoises, the lastnamed as part of a release program on St. Catherines Island. International projects, through the Field Veterinary Program, involved nutritional evaluations of penguins, seals, caiman, and African and South American hoofstock.

Field Veterinary Program

DR. WILLIAM Karesh directed 33 projects in South America, Africa, and Asia, and the program was funded with major gifts from the Schiff Family, Dr. Judith Sulzberger, Caroline Sidnam and Pamela Thye. For the first time, the health of wildlife populations-including penguins, guanaco, and marine mammals—was surveyed along the Patagonian coast of Argentina by Drs. Karesh and Cook, complementing ongoing programs in coastal Peru, assisted this year by Dr. Stetter and Senior Technician Ivan Llanes-Aponte. In Venezuela, government authorities asked Dr. Karesh to evaluate the condition of young endangered parrots that had been confiscated from an illegal shipment to Europe and were about to be released back into the wild.

Veterinary support was provided for Society conservation programs in Zaire and Cameroon, including evaluations of African buffalo and elephants and research involving radio-collaring the latter. Dr. Bonnie Raphael assisted in surgically implanting radio transmitters in pythons.

Continuing Asian projects included working closely with officials in Indonesia and Malaysia on wildlife management and health issues. Both countries are continually challenged to accommodate the needs of wildlife displaced or disturbed by human development and population growth. The Field Veterinary Program is providing training to wildlife professionals in both countries to help them meet the needs of a changing world.

SCIENCE RESOURCE CENTER

AFTER ITS first year of existence, the Center was able to open the Data Analysis and Technology Development Laboratory at Administration East headquarters. Funded in part through the efforts of the Wildlife Health and Sciences Committee with generous gifts-in-kind from Silicon Graphics, Inc. in Mountain View, California, the Laboratory serves Society personnel and affiliated students on projects requiring computer technology, including making full and easy access to Internet information available.

One Internet application is electronic mail, which Librarian/Archivist Steve Johnson has set up in a pilot project for curators, veterinarians, field biologists, educators, fundraisers, and other Society staff. Through the Scholastic Network (an education service of America Online), Director Fred Koontz and Nutritionist Ellen Dierenfeld reached schoolchildren around the country about the Society's work with endangered species. It was also proposed, with support from the Society's Education and Exhibition Committee, to develop an Internet Worldwide Web site at the Zoo.

A host of projects were conducted by Conservation Genetics Program Director George Amato. He confirmed the discovery in Laos of a species of muntjac, newly discovered by international Director for Science George Schaller. He established pedigrees for the Aquarium's beluga whales, which will help make possible their long-term genetic management. For Ivan the gorilla, he identified the subspecies, so that the correct mate can be found. And he verified the subspecies of a group of confiscated yellow-shouldered Amazon parrots, which were then reintroduced in their native Venezuela.

Post-doctoral scientist Peter Walsh came to us courtesy of National Science Foundation funds and the New York Consortium of Evolutionary Primatology (NY-CEP), a collaborative project of the Society, New York University, Columbia University, and the American Museum of Natural History. During his year here he counseled our field biologists on statistical

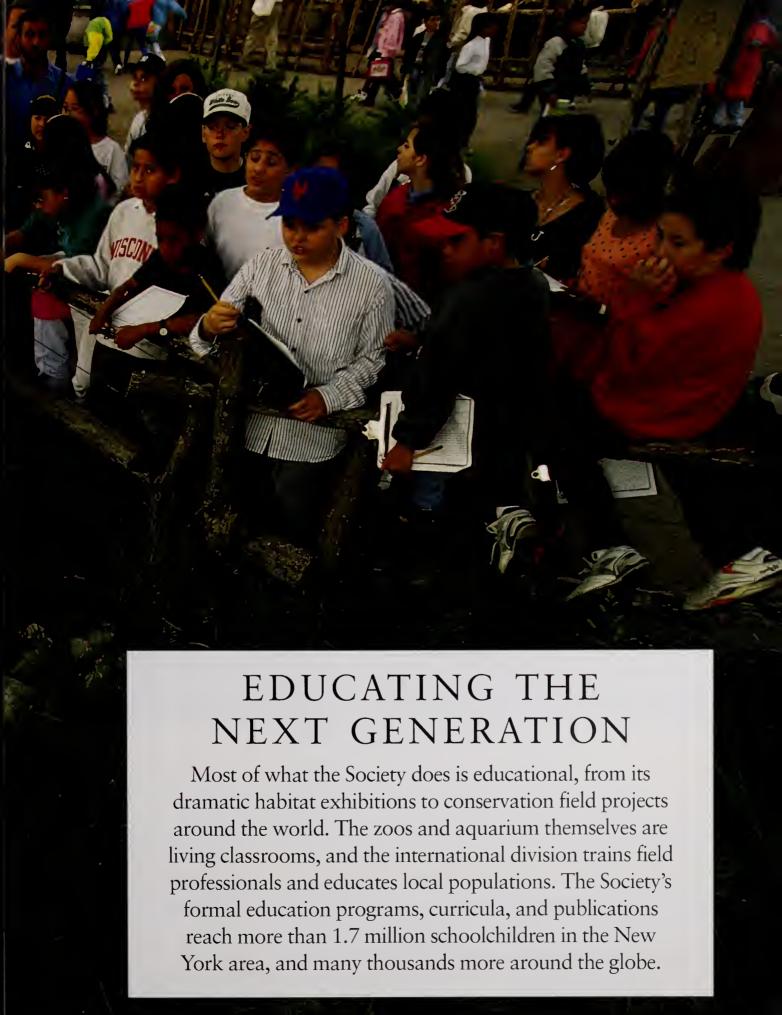
methods to estimate numbers of chimpanzees, elephants, gorillas, and rhinos in Cameroon, Tanzania, and Zaire; he aided Senior Keeper Doug Piekarz with the use of population viability computer models to manage marbled teals in zoos; and he advised on several behavioral enrichment studies conducted at the Bronx Zoo.

The Society became part of Columbia University's Center for Environmental Research and Conservation in 1995, represented by SRC Director Fred Koontz. Dr. Koontz also participates in NYCEP, which sponsored Columbia student Jeff Hatcher as an intern in computerized Geographic Information Systems. In the field Dr. Koontz consulted on the aerial radiotracking of released barn owls in Connecticut; advised on satellite tracking of elephants and other mammals; provided genetic and demographic analyses of tree kangaroos and mandrills; and supervised the monitoring of reintroduced black howler monkeys, now numbering about 75 animals, in Cockscomb Basin Wildlife Sanctuary in Belize.

The Keeper Training Program graduated 20 staff members and was coordinated by Susan Elbin, who also organized a special Centennial History Lecture Series for keepers. Dr. Amato coordinated a Science and Conservation Lecture Series open to all staff. Four pre-doctoral students joined the Resource Center under the direction of Drs. Amato and Koontz. Linde Ostro and Scott Silver are studying the ecology of reintroduced black howler monkeys in Belize. Howard Rosenbaum is working to identify familial relationships in pods of wild humpback whales. And José Bernal Stoopen is devoted to saving Mexican wolves in Mexico.

Animal Collection Services, under Nilda Ferrer, now holds over 25,000 individual animal records. Last year, more than 150 animal shipments to and from the Society's facilities, involving more than 1,000 animals, were coordinated by Ferrer, assisted by Helen Basic, Elba Pino, and Records Specialist Stephen Davis, before his retirement.







It's very exciting for our children to visit the Zoo. They come away not only with cognitive skills but very conscious of the need for conservation. Once the children are excited, it motivates and energizes the teachers, who have learned, through the Zoo's Staff Development Program, how to connect the experience with animals into all kinds of projects. They can see how important it is to build a firm foundation in the elementary grades. We feel very lucky—this is our backyard.

KATHLEEN POLLINA

PRINCIPAL OF P.S. 205, NEAR THE BRONX ZOO, AND A WCS WILDLIFE CONSERVATION ASSOCIATE. SHE AND THE SCHOOL HAVE BEEN CLOSELY INVOLVED IN THE ZOO EDUCATION DEPARTMENT'S DEVELOPMENT OF PABLO PYTHON LOOKS AT ANIMALS AND OTHER NATIONALLY VALIDATED CURRICULUM MATERIALS.

EDUCATING THE NEXT GENERATION

BRONX ZOO EDUCATION

National and International Programs THE DEPARTMENT'S comprehensive teacher training and curriculum dissemination program entered its second year in China. In June 1995, Supervisor Tom Naiman and Instructor Ron Griffith conducted twoweek-long teacher-training workshops for 50 teachers in Kunming, the capital of Yunnan Province. The participating teachers, trained in how to use Pablo Python Looks at Animals and Diversity of Lifestyles (WIZE), were scheduled to introduce the two Bronx Zoo curricula to their students in September. More than 4,000 Yunnan students already used Pablo and Diversity during the 1994-95 school year.

Meetings with Yunnan school principals and education officials revealed great support for the program. In conjunction with the Kunming Institute of Zoology and the Education Commission of Yunnan Province, Naiman and Griffith also conducted programs for the parents of children who had used the curricula. More than 300 parents attended, and many expressed their support for the program, citing its positive impact on their children. The progress of the program in two years is considered nothing short of remarkable by people who have tried to pursue other collaborative projects with Chinese educational institutions.

Elsewhere, the Bronx Zoo was the only U.S. zoo invited to attend the Latin American Zoo Educator's Conference in Guadalajara, Mexico, where, in January 1995, Tom Naiman presented papers titled "Zoo Education: A Changing Role," and "The Relationship Between Environmental Educators, Teachers, and Schools." Departmental consultation was in great demand throughout the year from a variety of international education projects, including those of Dr. Ryhana Raheem, an Asia Foundation fellow from Sri Lanka involved in the U.S. Asia Environmental Partnership, and of Dr. Yu Jiguang, Vice Bureau Chief of the Tourism Office in Tibet, who was referred by the U.S. Information Agency.





PAGES 22-23: CLASS AT AFRICAN PLAINS. TOP: THE SOCIETY'S EDUCATION PROGRAM IN CHINA, RUN BY TOM NAIMAN, WON THE 1995 EDUCATION AWARD OF THE AMERICAN ZOO AND AQUARIUM ASSOCIATION (AZA). ABOVE: TRUSTEE ANTHONY MARSHALL IS CHAIRMAN OF THE EDUCATION AND EXHIBITION COMMITTEE.

National Programs

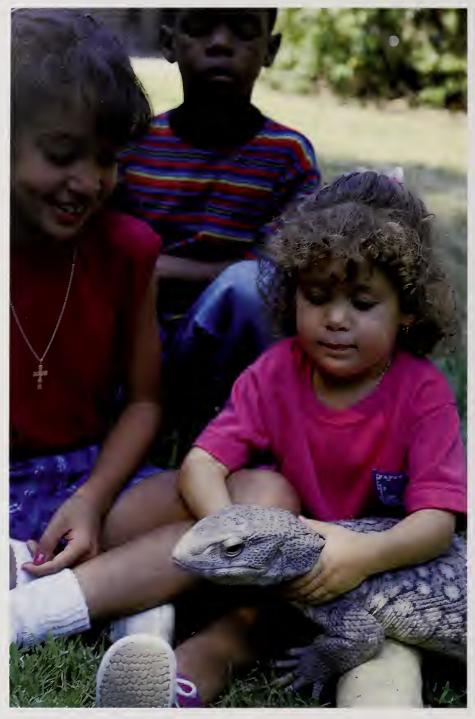
TWO NATIONAL curricula were completed during the year: *Habitat Ecology Learning Program (HELP)*, for grades 4 through 6, and *Voyage from the Sun*, for grades 5 through 9. The publication of *HELP* in fall 1995 will reward five years of develop-

ment funded by the National Science Foundation, including extensive teacher training. *HELP*'s six teachers manuals will feature over 150 multidisciplinary lessons in life science, ranging from the study of conflicts over water use in the U.S. to analysis of the intricate negotiations between conservationists and the Maasai people of Kenya. Spin-off educational programs and publications from this comprehensive curriculum are expected for years to come. Already, activities adapted from *HELP* have been featured in *Wildlife Conservation*'s "Kid's Connection" section.

Independent evaluators of the program have reported that more than 70 percent of HELP teachers increased their knowledge of habitat ecology as a result of being trained by Bronx Zoo staff and then teaching the curriculum to their students. The evaluators also found that 88 percent of these teachers improved the quality of their instruction, 82 percent of the students increased their understanding of fundamental concepts in habitat ecology, and 94 percent of parents observed their children explaining habitat ecology concepts and applying them to new situations. These evaluations have been essential in creating HELP and in its national dissemination.

Voyage from the Sun, funded in large part by a grant from the U.S. Department of Energy, was published and disseminated to 67 teachers in Providence, Rhode Island, the New York City area, and a rural school district near Athens, Georgia. Broader distribution is now planned. Voyage is designed to teach students about energy-what it is, where it comes from, how it is crucial to living systems, and why its conservation is important. Teachers participating in field testing reported that the curriculum was an innovative and needed addition to the resources available for communicating these difficult topics. Tracey Paladino-Sherding, a teacher from elementary school P.S. 29 in Yonkers, told us, "My students were learning and retaining more information than in any other lessons I have taught in science."

Project WIZE (Wildlife Inquiry through



LEARNING ABOUT WILDLIFE AND CONSERVATION BEGINS AT AN EARLY AGE, THROUGH SUCH BRONX ZOO PROGRAMS AS PABLO PYTHON LOOKS AT ANIMALS.

Zoo Education), the oldest and most established of the department's national programs, continued to produce more environmentally literate teachers and middle school students across the country. Rose Baker, formerly Curator of Exploration Centers at the Indianapolis Zoo, assumed the day-to-day responsibilities of disseminating WIZE under the leadership of Vice President for Education Annette Berkovits.

Thirteen awareness sessions, reaching

2,848 teachers, school administrators, and zoo educators in ten states, were conducted during the year. Bronx Zoo staff and previously trained teachers trained 260 new teachers in 16 states, resulting in 100 school adoptions. These sessions were hosted by zoos in New Orleans, Louisiana; Baltimore, Maryland; Melbourne, Florida; Buffalo, New York; Albany, Georgia; Peoria, Illinois; Tampa, Florida; Apple Valley, Minnesota; Columbia, South Carolina; and Atlanta, Georgia, as well as the Bronx

Zoo. A Certificate of Environmental Achievement from the national Awards for Environmental Sustainability was added to the long list of honors achieved over the past seven years by *WIZE*, which was also listed in Renew America's Environmental Success Index.

Pablo Python, for kindergarten through 3rd grade, is now used by schools in 26 states, the District of Columbia, and the Virgin Islands (as well as China), with nearly 2,000 Pablo teachers guiding about 73,000 students each year. Because of their innovations in designing Pablo as a multidisciplinary learning experience, Bronx Zoo staff were invited to present the curriculum to educators at a new national conference—Revitalizing Education through the Arts: A Goals 2000 Initiative—held at the Bank Street College of Education in New York City.

Zoo-based programs

IN CELEBRATION of the Society's Centennial, tented camps appeared in the Bronx Zoo for a brand new series of family overnight safaris. The evenings included latenight hikes through the Zoo, a family "Smellathon," puppet shows starring the Zoo's own "Pick-a-Proper-Pet Players," and a joyous Centennial campfire complete with stories, songs, and s'mores. The New York Times captured the spirit of adventure and discovery when it featured the first safari in a front-page article in its weekend section of June 9, 1995. The Times quoted one seven-year-old late on the night of the first session: "I'm having more fun than I've ever had in my life. I'm never going to go to sleep." In the morning, before the campers reluctantly departed, there were jogs, bird walks, animal aerobics, and tours of the World of Darkness. More than 527 parents and children attended the three sessions, making this one of our most popular family programs ever.

In addition to its wide range of weekday programs for schoolchildren, in on-site classrooms like JungleLab and Africa Lab, the department offered courses on 44 dif-

EDUCATING THE NEXT GENERATION



ferent topics for WCS members and nonmembers. Bronx Zoo staff conducted some of the most popular sessions. "Baboon Brain Teaser," with Primatologist Colleen McCann, explored the Zoo's behavioral enrichment program for primates. Curator of Horticulture Robert Halpern helped participants in "Beauty and the Beast" understand how plants in animal exhibits withstand the assaults of hungry herbivores and the ravages of New York City weather. In "Wildlife Careers," interested adults learned about the challenges and rewards of careers in wildlife biology, animal behavior, nutrition, and conservation. Geneticist George Amato described the high-tech world of conservation genetics in "Telltale Clues."

The 255 volunteers in the Friends of Wildlife Conservation gave 704 free Bronx Zoo guided tours to 18,944 schoolchildren and adults. They also gave special educational presentations, including mini-talks



HARRIETT KRASNOFF,
FOUNDER OF THE
FRIENDS OF WILDLIFE
CONSERVATION
OUTREACH PROGRAM,
VISITS THE MANHATTAN
PSYCHIATRIC CENTER
(ABOVE). OVERNIGHT
SAFARIS BROUGHT
HUNDREDS OF
CAMPERS TO THE
BRONX ZOO (LEFT).

at a Girl Scout Jamboree of 4,000 scouts and leaders, and contributed 17,228 hours tending biofact carts, assisting in animal behavior studies, helping at special events, and answering hundreds of letters from schoolchildren around the country. The Hospital Outreach Program reached 2,025 patients in hospitals, nursing homes, and psychiatric centers.

Friend Lew Egol received the coveted Mayor's Voluntary Action Award for 1995. One of only two honorees citywide, Lew was recognized for his work in the Friends of Wildlife Conservation Outreach Program, the Zoo's Nutrition Laboratory, and the Docent Training Class, and for his more than 15 years of dedicated service to the Zoo's Education Department.



There were things I never would have learned unless I had done this. Everything started to come together for me about the origins of life in the sea and how much really goes on under the water. We learned about the smaller animals, amoebas and fish, then after learning the basics we actually worked with the animals and went out on study trips. We really learned about how things work in nature. The instructors would stick with us until we understood, and it was always fun.

COURTNEY PERRY

FRESHMAN AT POLY PREP IN BROOKLYN AND A PARTICIPANT IN THE AQUARIUM'S MARINE TEEN INSTITUTE, AN AFTER-SCHOOL PROGRAM FOR VOLUNTEERS FROM JUNIOR HIGH SCHOOLS AND HIGH SCHOOLS IN NEW YORK CITY.

EDUCATING THE NEXT GENERATION

AOUARIUM EDUCATION

FOR "FISH That Go Zap!," the education staff wrote graphics, devised interactive elements, and helped develop and install this complex exhibition. Opened on April 29 to begin the Society's centennial year, "Zap!" employed several novel approaches to education, including the training and performance of four improvisational actors to interact with the audience and interpret concepts of biological electricity. Following classes on electric fish, fifthgraders from P.S. 230 in Brooklyn met with behavioral scientist and electric fish researcher Dr. Peter Moller for questions and answers. A videotape made during these sessions, emphasizing careers in science, research, and conservation, is now part of the exhibition itself.

This same gifted class, after participation in a year-long marine science curriculum, started a pen-pal project with children in Gambell, Alaska, former home of our three orphaned baby walruses. Through correspondence and videos the children shared school activities, expressed their feelings and curiosity about the differences in their lifestyles, and also discovered similarities, namely, a common love of video games. Through such interchanges it may be possible to establish a conservation connection through real-life experiences and understanding.

The new Marine Teen Institute, funded by the Altman Foundation, completed its first year with extraordinary success. Forty-four eighth-graders from six different local public and parochial junior high schools attended 88 sessions. Students participated in exciting marine science coursework, met with curators, aquarists, and trainers for career guidance, learned to do field research on the beach and aboard the CUNY Kingsborough Community College research vessel, and culminated the year with an Aquarium sleepover and family breakfast.

The Aquaravan made its debut during the year, funded by Independence Savings Bank and the Society's Conservation Council and gaily decorated by the Aquar-





INSTRUCTOR SUSAN ZOLDAK CONDUCTING A SCIENCE AT SEA CLASS WITH STUDENTS ABOARD THE PAST-TIME OUT OF SHEEPSHEAD BAY ABOVE . THE AQUARAVAN BROUGHT AQUATIC EDUCATION TO HOSPITALS, SCHOOLS, AND OTHER SITES IN THE METROPOLITAN AREA LEFT .

ium's graphics department. The brand new education vehicle enables our staff to bring conservation messages and the Fish and Fant-A-Sea programs to nursing homes, hospitals, schools, libraries, and community fairs throughout the five boroughs, Long Island, and New Jersey. More than 13,500 adults and children were reached this way last year.

Aquatic activism was encouraged. On June 8, 1995, World Oceans Day was simultaneously proclaimed here and at the New England Aquarium. Visitors were asked to sign specially designed "Save our Sharks" postcards. In New York more than 2,000 cards were signed and delivered to the National Marine Fisheries Service demonstrating concern for these magnificent predators. Volunteers manned shark biofact tables and gave interpretive talks on the urgent need for strict legislation and better management of the shark fishery. World Oceans Day marked the first collaborative effort to raise public awareness about the plight of the oceans and the need to protect large pelagic fishes.

CENTRAL PARK WILDLIFE CENTER EDUCATION

WITH SEVERAL new programs in place, the department enjoyed a record high attendance of more than 250,000 participants. The popular "Snooze at the Zoo," which sold out three times, brought families in



THE SOCIETY'S
CENTENNIAL WAS
TOUTED BY A TRIO
OF CONSTUMED ANTS
AT THE CENTRAL PARK
WILDLIFE CENTER
(ABOVE), WHERE
"NO MORE MONKEY
BUSINESS" AT THE
WILDLIFE THEATER
STARRED COTTON-TOP
TAMARIN AND
TOUCAN PUPPETS
(RIGHT).



for night safaris to zoo exhibits from 8 to 12, overnight in the Wildlife Conservation Center, and breakfast in the morning. The Wine & Cheese Lecture Series featured Society experts—Nutritionist Ellen Dierenfeld, Central Park Wildlife Center Director Dan Wharton, and Associate Curator Anne Marie Lyles—in evening sessions at the Zoo School auditorium. And a collaboration with the Asia Society was launched to teach schoolchildren visiting both facilities about monkeys.

For casual visitors, five- to ten-minute Wildlife Chats, with questions and answers, were offered by the volunteer Wildlife Guides at the polar bear, red panda, penguin, and snow monkey habitats. An actor playing Dr. Mac Cacque was also introduced at the snow monkeys to teach about the conservation connection between field science and zoos.

Three new shows played regularly at the Wildlife Theater, dramatizing the Center's exhibits and conservation message. Most popular was the cotton-top tamarin puppet show, "No More Monkey Business," which considered deforestation and the role of zoos in endangered species breeding. A second show starred Spade, a detective gone undercover, who shared the

secrets of the leaf-cutter ant colony. In the third show, Dr. Changelove, a slightly crazed scientist, tried to create the perfect creature that could survive all adversity. With the help of audience members and giant props like flippers, beaks, feet, and wings, Dr. Changelove and his audience learned why his experiment didn't work.

Costumed characters were also part of the fun in celebrating the Society's 100th anniversary. Our ant threesome—the queen, the soldier, and worker ants—were hits among children and adults alike. Special centennial birthday cakes were presented to our sea lions, penguins, and snow monkeys by chefs from Lutèce restaurant. Most happily, the first- and second-grade children of Midtown Elementary School created and artwork depicting 20 animals the Society has saved. It later appeared during the Mayor's proclamation for the Society's centennial.

Queens Wildlife Center Education

SCHOOLCHILDREN IN 174 groups from kindergarten through eighth grade enrolled in a variety of programs, including "Animals Around Us" for kindergarten, "Magnificent Mammals" for 1-3 (our most popular program), and "North American Wildlife" and "Animals in Danger" for third grade and beyond. Starting in the classroom, these sessions then introduce students to animals at the Center and their habitats.

Thirty high school students participated in the volunteer Summer Wildlife Guide Program. They and the adult Wildlife Guides provide information and answer visitor questions at the Sea Lion Pool, the spectacled bear habitat, and other sites.

The Education Center itself highlighted a different animal or wildlife theme each month. Toddler and family programs revolved around these themes, and related arts and crafts projects were presented during the summer and on weekends and holidays throughout the year. Other programs included workshops for nearly 200 local teachers, to introduce them to the facility's

EDUCATING THE NEXT GENERATION

educational possibilities, and overnight experiences for 12 scout groups totaling 185 participants.

In this centennial year, special weekend celebrations were particularly well attended. The actual centennial weekend, April 29-30, 1995, featured performer Dave Street and his "Recycling and Respect" show, with skits involving audience participation. The third annual "Bison Bonanza" on June 25-26, focused on prairie ecology and the Society's historic role in saving the species, offering country and western music with the group Savannah Sky, storytelling, many educational games, and mask-making and face-painting.

PROSPECT PARK WILDLIFE CENTER EDUCATION

THE CENTER TOOK PART in an international experiment that extended the possibilities of its educational role. For Turner Broadcasting's TV feature "Flamingo Watch," our instructors hosted an audience of middle school students who watched a live broadcast from Kenya and then had the opportunity to speak with a naturalist on the shores of Lake Nakuru. Their questions were answered on the national broadcast.

Programs for younger children drew more than 4,500 participants focusing on farm animals, predator-prey relationships, and "Beastly Behaviors." During the winter the Education Building was used as a Discovery Center on weekends, with crafts, games, and other activities offered for family learning. Our first exhibition at the Children's Art Gallery, part of the Animals in Art facility, was installed in spring with art by Brooklyn schoolchildren.

WILDLIFE CONSERVATION Magazine

NOW IN its 99th year of continuous publication, the Society's official magazine reports encouraging developments on three fronts: recognition, centennial, and costcutting. To strengthen the Society-maga-





THE MAY/JUNE 1995 "TOO LATE FOR TIGERS?" ISSUE OF WILDLIFF CONSERVATION REACHED. ABOUT 200,000 SUBSCRIBERS (TOP). TRUSTEE JOHN ELLIOTT, JR. HEADS THE MARKETING AND COMMUNICATIONS COMMITTEE (ABOVE).

zine identity, the WCS logo was made part of the cover design starting with the November/December 1994 issue. Sixty-six articles, columns, and "Conservation Hotline" stories showcased WCS projects. The Society's centennial was celebrated with the March/April issue, devoted entirely to the Society's story in words and pictures and written by WCS scientists and curators. Costs were cut, despite rising paper, postage, and printing prices, by implementing new technologies and doing most things in-house. The magazine's deficit was reduced by nearly two-thirds. It should also be noted that Wildlife Conservation earned nine national design awards during the year.

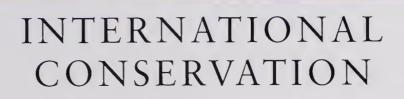
"On the Horns of a Dilemma" by Director for Asia Alan Rabinowitz, in the September/October 1994 issue, was one of the year's big stories. Hunted for its horn, which is used in traditional Asian medicines and sells for as much as \$27,000 a pound, the Sumatran rhino is one of the world's most endangered big

mammals. Only about 800 of them remain, scattered in a few forest pockets in Sumatra, Malaysia, and Borneo. At the request of the director of wildlife in the Malaysian state of Sabah, Rabinowitz led eight research teams on a survey of 400 square miles of proposed protected area. Their findings will help determine conservation strategies for the species.

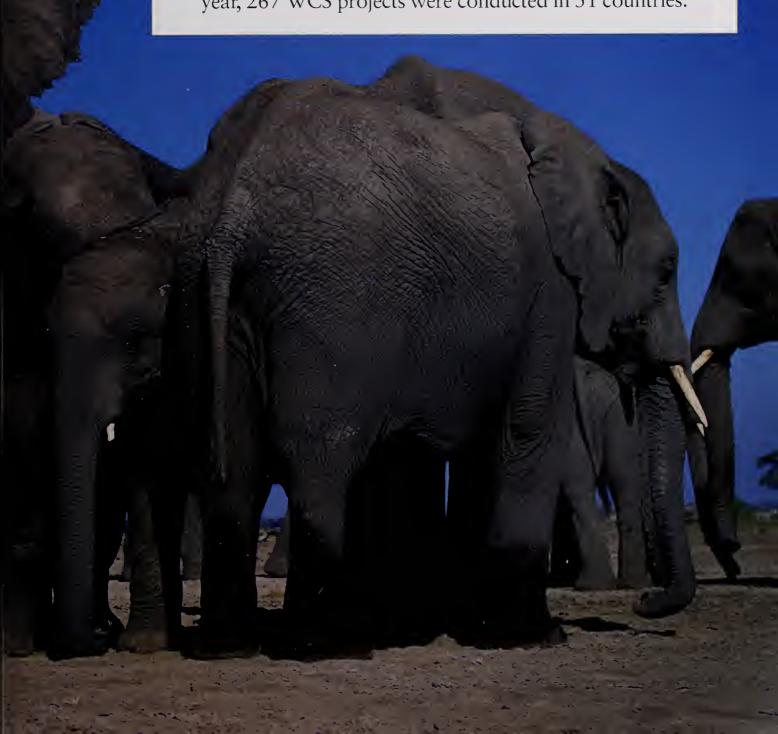
In "Understanding Tigers" (May/June 1995), WCS research scientist Ullas Karanth explores the secret world of tigers, which he radio-tracks on elephant back in his continuing study of their decline and what they need to survive. Karanth's project is the centerpiece of a major WCS Tiger Campaign to save the five remaining species in Asia.

The magazine's staff also produced Wildlife, the Bronx Zoo's visitor newspaper and guide, and various Society programs, advertisements, and other printed materials. The WCS Wildlife centennial calendar, featuring both archival and contemporary wildlife photography, was published by Harry N. Abrams, Inc., with text by Executive Editor Deborah Behler and photo consultation by Art Director Julie Maher.





WCS field scientists on five continents gather data to solve ecological problems. They work with local communities and government agencies to help answer the needs and aspirations of people and the requirements of wildlife. They teach environmental awareness and train conservation professionals to save wildlife and wild places in their own countries. Last year, 267 WCS projects were conducted in 51 countries.





A few years ago, before I got seriously involved in tiger conservation, George Schaller and I were out in the field when he recognized one of his study tigers passing by. We watched, and he simply said to me, "Ullas, it's up to you." His work had always been an inspiration for me, even before I knew him, and his words certainly confirmed that.

ULLAS KARANTH

WCS ASSOCIATE CONSERVATION SCIENTIST, WHOSE WORK IN INDIA OVER THE PAST SEVERAL YEARS HAS HELPED RAISE THE PROSPECTS OF SAVING TIGERS THROUGHOUT THAT COUNTRY.

INTERNATIONAL CONSERVATION

THIS WAS A YEAR of incongruities. On one hand—as is clear by the reports on the following pages—the breadth of WCS programs continued to expand. This growth reflects a global recognition that conserving the natural world is vital for national economic development. The Convention on Biological Diversity, negotiated at Rio de Janeiro, has been ratified in most of the countries in which we work. From Venezuela to Laos we are working closely with government agencies and other national organizations to integrate conservation into national planning. Here at home, support for conservation is wavering in government circles. Partly this is a consequence of the general cutback in government spending in our country, but it also reflects a preoccupation with short-term profit as opposed to long-term sustainability. Neither does our government recognize, evident in its failure to ratify the Convention, our obligations as stewards of all life on this planet. Nonetheless, WCS's global effectiveness has increased as private supporters have stepped into the breach left by government recision, providing the funds to launch new initiatives.

This also was a year in which we turned in new directions for inspiration. Our field conservation programs have traditionally been instructed by expertise drawn from North America and Europe. Over the last few years more and more of our projects have depended on the leadership and participation of conservation professionals working in their own countries, a trend that is particularly apparent in Latin America. Now this new expertise is challenging our traditional approaches to conservation. Our reliance on government agencies to regulate and administer parks and protected areas, for instance, is being replaced in some areas by greater reliance on non-government organizations and local community groups. Indeed, the recognition that local communities must also support conservation efforts has informed the design of many of our projects around the world.

And now we are reimporting these understandings back into our own country.



PAGES 32-33: ELEPHANTS IN AMBOSELI, KENYA. ABOVE: TIGERS IN INDIA'S NAGARAHOLE WILDLIFE RESERVE HAVE BEEN STUDIED BY WCS'S ULLAS KARANTH SINCE 1986.

This year we began focusing again on conservation in North America. And we find the lessons we have learned in foreign lands are very applicable. The idea that local communities and interest groups must be vested in the conservation process was put to good use in bringing together different groups in the Adirondack Mountains. Learning our lessons and not becoming complacent are essential if we are to continue being effective in a changing world.

AFRICA

SEVENTY-SIX PROJECTS were conducted in African savannas and rain forests. Several major inititatives, in Kenya, Tanzania, Cameroon, Rwanda, and Central African Republic, were aided by a major grant from the Walt Disney Company Foundation.

The first wildlife surveys in 25 years were initiated in Ethiopia's Danakil Desert by Senior Research Zoologist Patricia Moehlman, working with biologist Ato Fanuel Kebede and Acting Warden Ato Solomon Ayele and focusing on the status of the African wild ass. The survey extended into Eritrea, where Dr. Moehlman collaborated with various Eritrean organizations. As a result of her efforts, it is now documented that Equus africanus somaliens still exists in very low numbers in the Danakil Desert and near the Dallol Depression in Eritrea. Based on the survey, WCS's new National Environment Management Plan for Eritrea designated the Buri Peninsula as a high priority.

Drs. Moehlman and Michael Klemens continued the Biodiversity Assessment and Professional Development Program in Tarangire National Park in collaboration with Tanzania's national park service, the University of Dar es Salaam, and the Tanzanian Commission for Science and Technology. Data and specimens were collected on vegetation, invertebrates, fish, amphibians, reptiles, birds, and mammals. The established plots will be used as long-term faunal sampling stations. During the dry season survey, training was provided for the entire second-year class of wildlife ecology students at the University of Dar es Salaam.

In Kenya, Helen Gichohi became director of a newly-created national conservation organization, the African Conservation Center. The ACC is a direct offshoot of the WCS program in Kenya, continuing the tradition of combining scientific research with conservation action. Gichohi and the WCS team are increasingly involved in community-based programs while continuing ecological research to provide the basic core of information needed to manage parks and ecosystems. The Maasai Mara Working Group and the Kitengela and Amboseli Projects have been attempting to resolve conflicts with local people while promoting conservation, and progress is being made on all fronts.

The Coral Reef Internship Program directed by Tim McClanahan in Kenya is moving into its third round, with three people having successfully completed internships. The past year has been spent completing fieldwork on sea urchin removal experiments and algal succession studies, among other projects, focusing on



information important to the management of marine parks. Dr. McClanahan is now working with the Kenya Wildlife Service to begin planning for a new system of protected areas off Diani Beach.

In Zambia, Dale Lewis is working closely with the national park service under the ADMADE program, turning most of his attention to the training of conservation professionals and local managers, and to raising public awareness of wildlife conservation. He has organized conferences bringing together international experts, Zambian government officials, and local leaders, and has developed two new booklets written for local people in local dialects.

Working with Mbuti Pygmy assistants and Zairean botanists of the Centre de Formation et Recherches en Conservation Forestière (CEFRECOF) in Zaire, Senior Conservation Ecologist Terese Hart is creating an inventory of the Ituri Forest's floristic diversity. Several University of Kisangani students completed their degrees based on the project, and Jean Remy Makana is analyzing a portion of the inventory information for his Ph.D. The most unexpected botanical discovery to date is the presence of a high diversity of understory treelets and lianas hidden in the subcanopy

of the monodominant mbau forests. Many species have not been definitively identified, and new species may turn up. Some species were recorded for the first time in Zaire, and others for the first time outside West Africa.

Senior Conservation Zoologist John Hart and Ornithology Chairman Don Bruning, in collaboration with the University of Kisangani, initiated a project to determine the current distribution and conservation status of the Congo peafowl in eastern Zaire. Bryan Curran and Richard Tshombe continued their work with the village committees, collecting baseline socio-economic data and developing local community involvement in the management of the Okapi Wildlife Reserve. The Harts' projects in Zaire are supported by the Robert Wood Johnson 1962 Charitable Trust.

In eastern Zaire, WCS helped to bring public attention to the serious environmental impacts that the Rwandan refugees and relief agencies are having on the Virunga and Kahuzi-Biega National Parks. After observing extensive fuelwood harvesting, improper wastes dumping, and other problems first-hand, Jefferson Hall advised the United Nations Development Programme on implementing an emergency project

to mitigate effects on the environment.

Hall and colleagues completed the second round of their inventory of Grauer's gorillas, large mammals, and forest status in eastern Zaire, with support from Edith McBean Newberry and Mr. and Mrs. Bradley Goldberg. In the Maniema region, hundreds of miles were walked and three zones identified and sampled. Among other signs, distributional data on gorillas, chimpanzees, elephants, and the Congo peacock were collected. Results of the survey show a general reduction in the range of gorillas, but significant densities of gorillas and elephants in many areas.

Exploration into remote parts of the Lopé Reserve in Gabon by Lee White has revealed exciting new information. White encountered sun-tailed monkeys, an endemic primate discovered just ten years ago in central Gabon, which was not thought to occur in the reserve (or any protected area). His research group also found vestiges of several iron-age villages dating back about 1700 years, including the largest known settlement from this period in Central Africa, where there were remains of 100 or more iron-smelting furnaces. The sites are currently being excavated, and by determining the species of

INTERNATIONAL CONSERVATION

tree used to make charcoal for the furnaces and studying decorations on pottery shards, a great deal will be learned about the human populations and forest vegetation in ancient Lopé. White's work demonstrates that forest in this region, when left alone, is colonizing savannas and therefore increasing in size. Good news in an era of massive deforestation.

The Protected Area Conservation Strategy (PARCS) project, under the direction of Matthew Hatchwell and Annette Lanjouw, is gathering momentum. In early May, Lanjouw organized a successful PARCS training workshop at CEFRECOF in the Zaire's Ituri Forest that was attended by Protected Area Managers from seven Central African countries. The workshop was designed to expose protected area managers to the importance and process of conducting applied research activities and integrating the results into management strategies. PARCS has generated great enthusiasm about the use of creative and inexpensive forms of training and has channelled available resources toward protected area managers. Lee White, Annette Lanjouw, and Robert Fimbel are currently working on a manual for protected area managers in Central Africa.

Robert and Cheryl Fimbel and Director for Africa Amy Vedder, whose work is supported by the John and Marcia Goldman Philanthropic Fund, have visited Rwanda to develop a collaborative relationship with the new national park service, to continue WCS conservation efforts in Nyungwe Forest, and to define WCS's role in the new political climate. Kurt Kristensen is acting director of the project, rebuilding the program of ecotourism, forest management, and research. Despite the difficulties of the past year, the park service is fully staffed and working diligently to protect its natural areas.

The WCS program has been expanded into southeast Cameroon, with the Fimbels working as technical counterparts to the Ministry of Environment and Forests in the Lobeke region, a mammal-rich area contiguous to the Nouabalé-Ndoki National





MICHAEL FAY'S CONGO FOREST CONSERVATION PROJECT HAS FOCUSED RECENTLY ON LOWLAND GORILLAS (OPPOSITE PAGE AND TOP). TRUSTEE JOHN PIERREPONT CHAIRS THE CONSERVATION COMMITTEE (ABOVE).

Park in Congo. Bryan Curran and Lucie Zouya Nimbang are helping to establish liaison committees in the local communities. Dwight Lawson, Anthony Nchanji, and David Nzouango continue biological and socio-economic work in the Banyang-Mbo Community Forest Reserve in southwest Cameroon, conducting research on reptiles, amphibians, and elephants, and assisting communities in assuming responsibility for management of the reserve. Con-

sequently, the Minister of Environment and Forests signed a decree officially designating the reserve and assigning its management to the four surrounding communities supervised by WCS.

With the one-million-acre Nouabalé-Ndoki National Park decreed in December 1993, the Congo Forest Conservation Project under Mike Fay has been expanding to address issues of forest and wildlife management outside the park, including landuse planning to develop economic activities compatible with saving the core zone.

Daily monitoring by Andrea Turkalo of the Dzanga clearing in southwest Central African Republic, one of the few places where forest elephants can be observed on a regular basis, has thus far accounted for approximately 2000 elephants. By identifying the elephants individually, Turkalo is providing previously unattainable information about life histories, population and social structure, social and ecological behavior, and genetics and biometrics. Although many clearings exist in Central Africa, only Dzanga is known to consistently attract large numbers of elephants, ranging from 40 to over 100 animals per day.

In Ghana and Cameroon, Richard Barnes has been able to relate dung decay rates to easily measured environmental variables, thereby proving the importance of rainfall, among other factors, in estimating the density of forest elephants.

Claire Kremen and the WCS team in Madagascar have completed the proposal for a new 800-square-mile national park, surrounded by 380 square miles of management zones on the Masoala Peninsula. Masoala, with many endemic species and rare habitat types, is the largest block of rain forest left in Madagascar. Once gazetted, the national park will become the largest protected area in the country. To this end, WCS is working with the Malagasy government, CARE, and the Peregrine Fund, with support from USAID, to combine strong protection in the core area with multiple-use options for communities bordering the management zones.

A collaborative program to increase the



IN BRAZIL'S AMAZONIAN FLOODED FOREST, MARCIO AYRES AND HIS SCIENTIFIC TEAM WORK CLOSELY WITH THE LOCAL PEOPLE, WHO LIVE IN HOUSES THAT FLOAT DURING THE FLOOD SEASON.

level of professional development among African conservationists was formed between WCS and the University of Kent, England, with funding from the Darwin Initiative. Organized by Michael Klemens and Hilary Simons Morland, the program will provide support for three students from each of three countries (Tanzania, Zaire, and Madagascar) to attend a 12-month Master of Science program at the university. In addition, support will continue for a follow-up year of fieldwork when the students return to their respective countries and continue work in collaboration with a WCS project.

LATIN AMERICA

IN THE flooded forests of Amazonian Brazil, the Mamirauá program is successfully completing its first phase under the direction of Senior Conservation Zoologist and Carter Chair in Rainforest Ecology Márcio Ayres, with funding from the Robert Wood Johnson 1962 Charitable Trust. Research there involves more than 37 projects, ranging from the ecology of riverine dolphins and caimans to fisheries activities and the effects of selective logging. A management plan for the entire reserve is being developed that will actively involve the participation of local communities in the

protection of the forest and its wildlife. The project has attracted widespread attention, including ten national and international television specials during this last year and a special satellite uplink interview with a Japanese astronaut aboard the Space Shuttle that was broadcast live in Japan. The Brazilian government also made a major commitment to establish Mamirauá as one of the principal Amazonian research and conservation centers, a step that will go a long way to ensure the project's long-term success.

Patricia Majluf continues her work on coastal mammals and guano birds at Punta San Juan, Peru, with support from the Charlotte S. Wyman Trust's "Women in Conservation" program. More than 20 researchers from nine countries worked with her last year studying the interactions of humans, fisheries, and wildlife in one of the world's richest marine ecosystems.

In Charles Munn's area of Amazonian Peru, production of a new wildlife film is underway, and field workshops and wildlife censuses are now being conducted with the help of the Machiguenga Indian communities in Manu National Park. Munn's work with local conservation groups to provide legal training and land titles to these communities has effectively protected

an area the size of Connecticut from outside colonization. Munn was honored in the December 5, 1994 Time magazine as one of the world's 100 and United States' 50 most promising young leaders. His project received support during the year from the Walt Disney Company Foundation.

Andrew Taber has been working with an interdisciplinary field team on a proposal for a new national park in the Bolivian Chaco. The area surveyed is probably the largest ecologically intact region of tropical dry forest anywhere in the world and promises to be the most diverse and least disturbed region of the entire Gran Chaco ecosystem. Also in Bolivia, Damián Rumiz heads the WCS team now collecting information on the effects of commercial logging on wildlife. Several sites have been identified to study bird, mammal, and reptile communities in Santa Cruz Province.

In an effort to expand the scope of our training efforts, Director for Latin America Alejandro Grajal joined Stuart Strahl in Colombia to give a conservation science workshop organized by María Elfi Chaves. Representatives from Peru, Colombia, Venezuela, and Argentina were provided the tools to teach their own courses. Grajal also traveled to Argentina with Society President William Conway to assist with work on the Patagonian Coastal Zone Management Plan being carried out with funds from the United Nations Development Program (UNDP). The Argentine team, headed by Graham Harris and Claudio Campagna, has finished major surveys of seabirds and coastal mammals and the effects of oil pollution, ecotourism, and commercial fisheries on the Patagonian ecosystem.

The USAID-funded Sustainable Use of Biological Resources (SUBIR) program in Ecuador began its second phase, concentrating on developing effective conservation measures for the buffer area around the Cotacachi-Cayapas Ecological Reserve. Alejandro Grajal coordinated work with our partner organization EcoCiencia and a wide spectrum of biologists, land-use experts, and local indigenous groups. Important funding comes from the John D. and

INTERNATIONAL CONSERVATION

Catherine T. MacArthur Foundation.

New living facilities were added to the Dedemay Biological Station as part of the Nichare River project in Venezuela. In January, 20 students and faculty from Princeton University visited the station for a course on tropical ecology. The project counts on close cooperation with the Ye'Kwana Indian community and is providing unmatched opportunities for the study of tapirs, parrots, and river turtles in an uncommonly pristine tropical rain forest of the unique Guyanan Shield area of southern Venezuela.

John Thorbjarnarson's work on crocodile and anaconda conservation in Venezuela has involved close collaboration with the government wildlife agency and several local private groups. Last year a new site, the Aguaro-Guariquito National Park, was selected for releases of captive-bred endangered Orinoco crocodile, bringing to three the number of areas where crocodiles are being restocked. This year Thorbjarnarson also carried out crocodile and turtle conservation projects with local biologists and students in Belize, Brazil, Colombia, and the Dominican Republic.

On Margarita Island in Venezuela, WCS collaboration with partner organization Provita has resulted in the beginning of a recovery for endangered yellow-shouldered parrots. Research on nesting biology continues and the foster nests and nestguarding programs are proving effective.

The Paseo Pantera project—the goal of which is to create an unbroken network of biotic corridors protecting plant and animal life throughout Central America—is nearing completion of its first planning cycle under Regional Coordinator for the Caribbean and Mesoamerican Program Archie Carr III. In the final year of its first phase, the focus has been on regional strategy, coral reef conservation projects, regional environmental education, and conservation planning in the tri-national area of Guatemala, Belize, and Mexico. The regional strategy has been completed by Mario Boza, founder of the Costa Rican National Park Service, documenting the great biodiversity of the region and mapping out a long-term plan for its conservation. The Society hired Dr. Boza to continue his outstanding work on the Mesoamerican biological corridor.

In the Maya Forest area of Guatemala, Belize, and Mexico, the Paseo Pantera team is mapping the natural resources and potential conservation corridors of the region and is researching land tenure issues in the area. The public use plan and environmental education projects for the spectacular Tikal National Park are near completion.

Paseo Pantera launched a coral reef



AN ADVERTISING CAMPAIGN TO HELP STOP THE USE OF TIGER PARTS WAS LAUNCHED IN ASIA BY OGILVY MATHER HONG KONG.

conservation project that has already brought representatives from seven Central American and greater Caribbean countries to a monitoring workshop in Belize. The group will review and refine common monitoring techniques for reef conservation in the region. Research and training continues with Jacque Carter's work at Middle Caye, where the Society's research station is now functioning. Carter and his family spent a year at the isolated station as part of a reef conservation program in collaboration with the Belize government.

Three important works for use in environmental education throughout the region were scheduled for completion by Paseo Pantera staff and associates-a natural history travel guide, a book on the natural and cultural history of Central America, and a handbook on using ecotourism for conservation in Central America.

ASIA

AS POLITICAL and trade barriers fall, Asia's last great pockets of natural resources have become more vulnerable. To address the issues, Director for Asia Alan Rabinowitz brought together seven countries, historically isolated by political and ideological differences, at the first conference for Trans-Boundary Biodiversity Conservation in the Eastern Himalayas. The conference created an opportunity for more than 50 delegates from China, India, Lao P.D.R., Myanmar, Nepal, Thailand, and Vietnam, to openly discuss such problem areas as uncontrolled border trade in plants and animals, the development and exploitation of major waterways such as the Mekong, Brahmaputra, Red, and Salaween rivers, and the protection and management of large trans-border forested areas. As a result of the conference, the representative countries agreed to an action plan which opened lines of communication and information exchange for the future. A second smaller conference, hosted in Thailand, and including delegates from Malavsia and Cambodia, reviewed some of the actions already taken as a result of the first conference, and focused specifically on problems and solutions for trans-boundary issues in the Indo-Malayan region.

Training, surveys, and small grants continued to increase in Myanmar, where Tint Lwin Thaung was appointed country coordinator. Dr. Rabinowitz and Conservation Zoologist Elizabeth Bennett conducted the first field training course in one of Myanmar's largest protected areas, Ahlaungdaw Kathapa National Park. In an economically impoverished country where few resources are available to wildlife managers, the government welcomed the opportunity to provide professional training to its staff. Furthermore, recognizing WCS's expertise in research and conservation, the Minister of Forestry of Myanmar also requested Dr. Rabinowitz to assist in a survey which would result in the creation of Myanmar's first marine national park, a protected area centered on Lampi Island in the Mergui Archipelago.



For 100 years the Wildlife Conservation Society has set standards that zoos and other international conservation institutions have had to follow, and I feel fortunate to have gotten my start on the staff there in the 1970s studying primates in Surinam. No other similar institution in the world has had such a key role for such a long time. WCS President William Conway ranks among the five leading thinkers in international conservation in the modern era.

RUSSELL A. MITTERMEIER

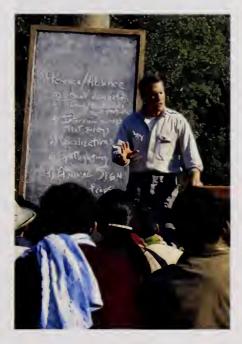
PRESIDENT OF CONSERVATION INTERNATIONAL

INTERNATIONAL CONSERVATION

Associate Conservationist William Bleisch is working with staff from the Lao P.D.R. Forestry Department, fielding teams to survey large mammals, rodents, bats, birds, and fish in that country's newly created protected area system, with generous support from the Liz Claiborne and Art Ortenberg Foundation and the John D. and Catherine T. MacArthur Foundation, which also funds WCS work in Myanmar. Members of these teams discovered several new bat and fish species and rediscovered a little-known pig species that was last reported in 1892. In addition to fielding survev teams, Associate Conservationist Mike Meredith has been working with local villagers and authorities to assess resource needs and to improve the effectiveness of community conservation efforts.

As a part of WCS's Tiger Campaign, Le Xuan Canh, a Vietnamese scientist, conducted a survey on the status of Indo-Chinese tigers and their prey on the Tay Nguen Plateau and surrounding regions in southern Vietnam, the country's largest existing forest area. Nearby, in Thailand, Cathy Conforti, using camera-traps and other field techniques, completed a two-year survey on the relative abundance of forest carnivores, including tigers, in one of Thailand's best and biggest protected areas, Huai Kha Khaeng Wildlife Sanctuary. Her work resulted in the first photographs of the rarely seen marbled cat and the Asian golden cat in the wild. In Russia's Far East, the Hornocker Wildlife Research Institute, with support from WCS, completed one of the most extensive surveys of Siberian tigers yet carried out, standardizing techniques so that future surveys might be comparable.

In India, Associate Conservation Zoologist Ullas Karanth, our India Program Coordinator, was appointed to two important tiger policy committees by the Indian government. Dr. Karanth also initiated the all-India tiger survey that will provide the most accurate assessment to date of the Bengal tiger's true status. His census methods, which involve camera-traps and allow him to correlate prey densities and biomass with possible tiger numbers, are expected



DIRECTOR FOR ASIA ALAN RABINOWITZ (ABOVE) AND ELIZABETH BENNETT CONDUCTED THE FIRST FIELD TRAINING COURSES FOR WILDLIFE MANAGERS IN MYANMAR.

to produce far more accurate figures on tiger densities than ever before.

After many miles of traveling, interviewing, and living among local hunters and villagers, Elizabeth Bennett completed a three-year field study on the effects of local hunting on wildlife in the East Malaysian states of Sarawak and Sabah. Dr. Bennett's work will help the government in efforts to control and regulate hunting, and will provide significant input into a Wildlife Masterplan for Sarawak that has recently been requested by the Sarawak Forestry Department. In May, Dr. Bennett received the prestigious Order of the Golden Ark from Prince Bernhard of the Netherlands in recognition of her many years of commitment to conservation. Core support for her work is provided by the John D. and Catherine T. MacArthur Foundation.

After completing his study on the Tonkin snub-nosed langur in Vietnam, Associate Conservation Zoologist Ramesh Boonratana rejoined WCS's Malaysian program to initiate an intensive three-year project to survey Malaysian megaherbivores in Sabah. His recent survey in Danum Valley found few Sumatran rhinos but less evidence of recent poaching than a previous survey by Alan Rabinowitz in 1992.

With the help of WCS Nutritionist Ellen Dierenfeld, Margaret Kinnaird and Tim O'Brien have made a significant discovery about the diets of forest frugivores. Their study revealed that figs are likely to be an important natural source of calcium, a mineral critical for strengthening egg shells and building strong bones for frugivores such as red-knobbed hornbills and black macaques. This new data may help clarify why animals choose certain fruits. Through their lobbying efforts, Drs. O'Brien and Kinnaird may soon have their research site, Tangkoko Nature Reserve, incorporated into Bunakan National Marine Park. They are currently initiating research, in cooperation with BirdLife International and Indonesia's Ministry of Forestry, on the Sumba Island hornbill, the most endangered hornbill in the world.

In a remote region of Papua New Guinea, Program Assistant Seldon James, who worked in Crater Mountain Conservation Area for more than two years to encourage local landowners' participation in natural resource management, was succeeded by two national field coordinators, Robert Bino and John Ericho. With the advent of a major grant from USAID, WCS prepares to launch an exciting conservation project in Crater with the Research and Conservation Foundation of Papua New Guinea. WCS has also hired two new resident biologists who will initiate a biological survey of the entire Wildlife Management Area, and coordinate the existing training and education program as a part of this comprehensive project. Funds from the Liz Claiborne and Art Ortenberg Foundation and the John D. and Catherine T. MacArthur Foundation have been essential to this work.

NORTH AMERICA

IN 1994, after a 20-year lapse, the Wildlife Conservation Society renewed its centuryold commitment to conservation in the United States. The revived program fills a real need in an area that has been comparatively neglected in recent years. Identified as initial target areas are northeastern forests, eastern wetlands, and the critical role of predators.

Under Director for Conservation Operations William Weber, and supported by the Geraldine R. Dodge Foundation, the revived program began its forest work in the northwestern quadrant of New York's Adirondack Forest Reserve, where wilderness protection has been balanced with multiple use for more than a century. In this Oswegatchie region, which contains the largest stand of old-growth forest (50,000 acres) east of the Mississippi and extensive wetlands of global importance, WCS and the Sagamore Institute of the Adirondacks brought together 25 representatives of major interest groups, including private landowners, forestry companies, public agencies, local governments, conservation organizations, and selected researchers. The participants were able to identify more clearly their common interests, their remaining conflicts, and their commitment to solving problems. The meetings also helped WCS identify areas where applied field research could generate key information for improved management, including wetland inventories, forest regeneration, and the critical role of beavers as Adirondak landscape architects.

Funded by a three-year grant from the Geoffrey Hughes Foundation, a major wetland conservation initiative was begun in the Berkshire-Taconic area of Massachusetts and Connecticut, where Allison Whitlock, in consultation with Michael Klemens, is studying the highly endangered bog turtle. A parallel study, representing the bog turtle's southern range and contrasting socio-economic conditions, is underway along the Blue Ridge Plateau in Virginia.

In the first WCS predator initiative, Joel Berger and Carol Cunningham are examining the role of large predators in controlling moose densities and the subsequent impacts on vegetation. For comparative purposes, their research sites are in Alaska, where both grizzlies and wolves are present; the Greater Yellowstone Ecosystem in



WCS CONSERVATION STUDIES IN EASTERN
U.S. WETLANDS FOCUS ON THE ENDANGERED
BOG TURTLE.

Wyoming, which has only grizzlies (though wolves should be present in a few years); and Bridger-Teton National Forest in Wyoming, which has neither species. WCS also hosted a conference on large carnivore conservation in Wyoming in September.

With support from the Robert Wood Johnson 1962 Charitable Trust, Lincoln Brower continues his research and monitoring program on the monarch butterfly, which covers the eastern flyway of monarch migration from its breeding grounds in the northern U.S. to its overwintering habitat in the Mexico's threatened Oyamel Forest. Brower is currently translating research results into conservation action.

CONSERVATION POLICY

AS A MEMBER of the Endangered Species Coalition and part of the environmental network in Washington, D.C., WCS has been countering efforts in Congress to drastically curtail the protection of endangered species and eliminate foreign assistance to vital conservation projects overseas. Because WCS is recognized for its expertise on wildlife, President William Conway was invited, along with other well-known scientists, to participate in ongoing discussions with Speaker of the House Newt Gingrich on the Endangered Species Act.

WCS was well represented at the November biennial meeting of CITES (Con-

vention on Trade in Endangered Species) at Ft. Lauderdale, Florida. Several factsheets on key issues, developed under Policy Analyst Dorene Bolze, were distributed. The U.S. successfully won support for its proposal to require controls on the pet trade in box turtles, a growing problem identified by Director of Program Development Michael Klemens. WCS Vice President John Robinson was crucial in the development of new criteria for determining what species get protection under the treaty, how to identify them, and when legal protection should apply. Unfortunately, proposals to control the trade in many timber species and bluefin tuna did not pass.

In December, on behalf of our Tiger Campaign, WCS launched the first advertising effort in Asia to persuade consumers that the use of tiger parts in traditional medicines is annihilating tiger populations. TIME, Asia, Inc., and other magazines have run spreads of our ads gratis. Halfminute television spots in English, Mandarin, and Cantonese have been running free-of-charge on STAR-TV, the largest satellite network in Asia. The campaign was designed pro bono by Ogilvy & Mather in Hong Kong, and one spread won the Gold Medal Award for the Best Public Service Print Advertising on environmental issues at the prestigious New York Art Director's Festival in 1995.

The Critical Ocean Wildlife Recovery Initiative (COWRI), a collaboration with the Aquarium (see p. 16), is joining forces with five other organizations—National Audubon Society, New England Aquarium, Natural Resources Defense Council, National Coalition of Marine Conservation, and World Wildlife Fund-to form the Ocean Wildlife Campaign. This threeyear effort, launched with the generous support of the Pew Charitable Trusts, focuses on the Atlantic bluefin tuna and other fish management issues, the development and implementation of the U.N. treaty on migratory fish, and the shark trade. WCS has also received support from the Packard Foundation to hire an ecologist to deal with fisheries issues.

INTERNATIONAL CONSERVATION PROJECTS

AFRICA

BOTSWANA

 Effects of elephants on woodland habitats. Raphael Ben-Shahar.

CAMEROON

- Cameroon Biodiversity Project (W'CS/USAID). James Powell.
- Ecology and conservation of forest elephants. James Powell and Anthony Nchanji.
- Biodiversity assessments and forest management. James Powell, Victor Belinga, and Dwight Lawson.
- Forest surveys and strategic planning in the Lobéke region. Cheryl Fimbel, Robert Fimbel, Leonard Usongo, and Paul Elkan.
- Community participation in and conservation of the Lobéke region. Bryan Curran, David Nzouango, and Lucie Mimbang.
- Black-casqued hornbill home range, diet, and keystone aspects. Ken Whitney, M.K. Fogiel, T.B. Smith, and V.T. Parker.

CENTRAL AERICAN REPUBLIC

- 8. Ecology and conservation of small carnivores, Justina Ray.
- Dzanga Forest elephant study. Andrea Turkalo and J. Michael Fay.
- Ecological and social influences on foraging in gorillas. Michele Goldsmith.
- 11. Logging impacts on small mammal communities. Jay Malcolm.

CONGO REPUBLIC

- Congo Forest Conservation Project (WCS/USAID) (WCS/World Bank-GEF). J. Michael Fay, Marcellin Agnagna, Richard Ruggiero, Matthew Hatchwell, and Jerome Mokoko.
- Biological surveys, inventories, and research in Nouabalé-Ndoki. J. Michael Fay, Marcellin Agnagna, Richard Ruggiero, and Steve Blake.
- Conservation education and NGO liaison. Matthew Hatchwell and J. Michael Fay.

FCVPT

15. Status of the Egyptian tortoise. Sherif El Din Baha,

SHOTE

- 16. Coastal zone conservation and management. Jesse C. Hillman.
- 17. Bale Conservation Project. James Malcolm.
- 18. Omo National Park. Catherine Schloeder and Michael Jacobs.

GABON

19. Research and training for management of Lopé Forest

- (WCS/ECOFAC). Lee White.
- 20. Forest Dynamics in Lopé Forest. Lee White.

GHAN.

21. Forest elephant survey methods. Richard Barnes.

IVORY COAST

22. Manatees, coastal mangrove conservation, and education. Kouadio Akoi.

KENYA

- Ecological monitoring and management in Amboseli National Park, David Western and African Conservation Center.
- 24. Savanna fire ecology and management. Helen Gichohi.
- 25. Wildlife distribution and habitat use in the Kitengela Corridor Helen Gichohi.
- Masai Mara Working Group. Mary O'Grady, W. Alton Jones Foundation, and Helen Gichohi.
- 27. Ecological role of elephants outside of parks. John Waithaka.
- Wetlands dynamics in Amboseli Park. Andrew Muchiru.
- 29. Coral reef ecology and conservation. Tim McClanahan.
- MALAGASY REPUBLIC
- 30. Masoala Park Creation and Buffer Zone Management (WCS/CARE/USAID). Clare Kremen and Philip Guillery.
- Ecological monitoring and professional training. Clare Kremen, Robert Fimbel, and Amy Vedder.
- Distribution, status, and biology of flat-tailed tortoises. John Behler.

NAMIBIA

33. Behavioral ecology and conservation of black-faced impala in Kaokaland. Wendy Green and Aron Rothstein.

RWANDA

34. Nyungwe Forest Conservation Project. Cheryl Fimbel, Robert Fimbel, and Amy Vedder.

SIERRA LEONE

- Potential of sacred groves for biodiversity conservation. Aiah Randolph Lebbie.
- Ecology and conservation of white-necked picathartes. Hazell Thompson.

SOUTH AFRICA

37. Cape parrot ecology and status. Olaf Wirminghaus.

TANZANIA

- Social organization, resource use, dispersal, genetics, and disease in jackals. Patricia Moehlman.
- Biodiversity inventory, research, and monitoring in Tanzanian national parks. Lota Melamari, Patricia Moehlman, and

Michael Klemens.

- 40. Training and conservation education. Patricia Moehlman.
- 41. Afromontane flora of Mount Kilimanjaro. John Grimshaw.
- 42. Wildebeest population dynamics in the Serengeti. Simon Mduma.
- 43. Elephant impact on woodland vegetation in Ruaha National Park. Cuthbert Nahonyo.
- 44. Herbarium development in Tanzanian national parks. Alawi Msuya.
- 45. Primate conservation, Gombe. Shadrack Kamenya.

UGANDA

- 46. Kibale Forest Conservation Project (WCS/USAID). Graham Reid.
- 47. Environmental education, outreach, and agroforestry. Kibale Staff.
- 48. Crop loss to wildlife in forest buffer zone. Lisa Naughton.
- Analysis of institutions, laws, and policies for protection of Lake Victoria. Nightingale Rukuba Ngaiza.
- Fish conservation, Lake Victoria Basin. Lauren Chapman and John Olowo.
- Selective logging impacts, Budongo Forest. Andrew Plumptre.

ZAIRI

- 52. Ituri Forest Project. Terese Hart and John Hart.
- Okapi and duiker ecology and conservation. John Hart and D.D. Batido.
- Forest Research and Training Center (WCS/USAID). Terese Hart, John Hart, and Robert Mwinyihali.
- Comparative forest dynamics and botanical inventories.
 Terese Hart, Bola M. Lokanda, and Makana Mekombo.
- Sociological Surveys and Local Participation, Okapi Wildlife Reserve (WCS/World Bank).
 Bryan Curran and Richard Tshombe.
- Grauer's gorilla census and eastern forest large mammal surveys. Jefferson Hall.
- 58. Congo peacock survey. John Hart and Robert Mwinyihali.
- 59. Gorilla genetics. Kristin Saltonstall.

ZAMBIA

- 60. Nyamaluma Community-based Training and Land Use Planning/ADMADE (WCS/USAID). Dale Lewis.
- ADMADE Lease Agreement (WWF/USAID). Thomas Ankerson, Richard Hamann, and University of Florida School of Law.

REGIONAL

- PARCS Training Needs Assessment and Pilot Projects (WCS/ WWF/AWF/BSP/USAID). Annette Lanjouw, Matthew Hatchwell, and Hilary Morland.
- 63. Methods for forest elephant surveys in Central Africa, Richard Barnes.
- 64. Integrated monitoring program for trans-boundary forest conservation in Cameroon, Central African Republic, and Congo. Lee White and Bryan Curran.
- Socioeconomic assessments and local community participation in African forests. Bryan Curran.
- Assessment of Rhino Conservation Strategies (WCS/WWF).
 Nigel Leader-Williams, Esmond Bradley Martin, David Western, and Holly Dublin.
- 67. Training in African coral reef ecology and management. Tim McClanahan.
- 68. African wild ass surveys, Ethiopia and Eritrea. Patricia Moehlman.

LATIN AMERICA

ARGENTINA

- 69. Natural history and wildlife conservation. William Conway.
- Patagonian Coastal Zone Management Plan (WCS/GEF/).
 William Conway, Guillermo Harris, Claudio Campagna, and Fundación Patagonia Natural.
- 71. Fundación Patagonia Natural support. Guillermo Harris.
- Ecology and conservation of the Magellanic penguin. Dee Boersma and Pablo Yorio.
- 73. Ecology and conservation of marine mammals in Península Valdés. Claudio Campagna.
- Natural history of Patagonia, conservation strategies, and Península Valdés station management. Guillermo Harris.
- 75. Ecology and conservation of marine birds. Pablo Yorio.
- 76. Punta Leon seabirds and mammals. Pablo Yorio, Claudio Campagna, and Guillermo Harris.
- 77. Pollution impact on Magellanic penguins. Esteban Frere and Patricia Gandini.
- 78. Ecology and management of Culpeo foxes. Andres Novaro.
- BELIZE
- Belize Barrier Reef Management. Jacque Carter and Janet Gibson.
- 80. Tropical forest reserve planning. Bruce Miller and Carolyn Miller.
- 81. Conservation of biodiversity. Jeanette Bider, Vernon Card, and Douglas James.

INTERNATIONAL CONSERVATION PROJECTS

- 82. Nesting ecology, food habits, and population survey of Morelet's crocodile. Richard R. Montamucci and Steven G. Platt.
- 83. Protected areas management plan and database. Bruce and Carolyn Miller.
- 84. Conservation and ecology of American crocodiles. Steven G. Platt and John Thorbjarnarson.

- 85. Ungulate research and training. Andrew Taber and Fundación Amigos de la Naturaleza.
- 86. Abundance, distribution, and habitat use of crocodilians in Beni. Lius F. Pacheco.
- 87. Alto Madidi protected area planning. Rosamaria Ruiz.
- 88. Status of blue-throated macaw. Charles Munn.
- 89. Effects of logging on ungulates and white-lipped peccary behavior. Lilian Painter.
- 90. Effects of logging on the black spider monkey. Robert Wallace.
- 91. Impact of forestry on wildlife, BOLFOR, Damián Ruiz.
- 92. Planning and design of new national park in the Chaco region. Andrew Taber.

- 93. Flooded forest conservation in Central Amazon, Márcio Ayres.
- 94. Fish ecology. Helder Queiroz, Ronaldo Barthem, and Márcio Ayres.
- 95. Population and ecology studies of crocodilians. Ronis Silveira and John Thorbiarnarson.
- 96. Hyacinth macaw conservation. Charles Munn and Carlos Yamashita.
- 97. Lear's macaw conservation. Charles Munn.
- 98. White-lipped peccary conservation in Maracá. José Fragoso.
- 99. Frugivores in the Atlantic coast forest. Mauro Galetti.
- 100. Frugivores in small protected areas in SE Brazil, Sandra Bos Mikich.
- 101. Distribution of birds in the Atlantic coast forest. Jacqueline Goerck.
- 102. Vertebrate community structure in western Amazonian forests. Carlos A. Peres.

COLOMBIA

- 103. Regional training coordination. Maria Elfi Chaves.
- 104. Student grants program. María Elfi Chaves and FES.
- 105. Salvini's curassow ecology. Marcela Santamaría Gomez.
- 106. Avian seed dispersers in the Central Cordillera. Sandra Arango Caro.

- 107. Ecology of the yellow-spotted Amazonian river turtle. Vivian P. Páez and Brian Bock.
- 108. Conservation of the Orinoco crocodile. L. Myriam Lugo Rugeles.
- COSTA RICA
- 109. Tarpon status. John Dean and William McLarney.
- 110. Park corridor planning, Tortuguero. Archie Carr III.
- 111. Conservation genetics of the green sea turtle. Tigerin Peare.
- 112. Creation of wildlife habitat. Lynn Carpenter and Mario Cordero.
- 113. Ecotourism and riparian corridor, Sarapiqui River. Federico Paredes.
- 114. Monitoring indicator bird species and habitat. Theodore Simons.
- 115. Great green macaw habitat requirements. George Powell and R. Bjork.
- 116. Conservation implications of agricultural windbreaks. Karen Nielsen and Debra De Rosier.

DOMINICAN REPUBLIC

117. Population ecology and conservation of American crocodiles. Andreas Schubert.

ECHADOR

- 118. Mountain tapir ecology and conservation. Craig Downer, Armando Castellanos, and Jaime Cevallos.
- 119. Sustainable Use of Biological Resources Project (WCS/USAID/ CARE/TNC). Jody Stallings, Alejandro Grajal, and EcoCiencia.
- 120. Wildlife ecology training courses. Ecociencia, Peter Feinsinger, Marty Crump, Jack Putz, Stuart Strahl, and Jody Stallings.
- 121. Student grants program. Eco-Ciencia and Jody Stallings.
- 122. Genetic analysis of Galápagos tortoises. Edward Louis.
- EL SALVADOR
 - 123. Field ornithology training workshop. Oliver Komar.
 - 124. White-fronted parrot biology and conservation. Alicia Díaz and Nestor Herrera.
 - 125. Coastal waterbird colonies. Wilfredo Rodriguez.

GUATEMALA

- 126. Wildlife monitoring in Tikal National Park. Howard Quigley, Milton Cabrera, and Maria José Gonzalez.
- 127. Ocellated turkey study in Tikal National Park. Maria José Gonzalez and Maria Mercedes Lopez.
- 128. Conservation of seagrass bed fishes and macroinvertebrates on the Atlantic Coast. Alejandro Arrivillaga.

- 129. Herpetofauna of Caribbean rain forests. Eric Nelson Smith Urrutia.
- 130. Primate survey. Johanna Motta
- 131. Secondary succession in abandoned farms, Maya Biosphere Reserve. Patricia Orantes.

GUYANA

132. Impact of gold-mining on fish communities. Godfrey Bourne.

- 133. La Muralla National Park resource inventory management planning. Archie Carr III, James Barborak, and Sergio Midence.
- 134. Strengthening of the COHDE-FOR wildlands, Archie Carr III and James Barborak.

MEXICO

- 135. Monarch butterflies. Alfonso Alonso and Lincoln Brower.
- 136. Rain-forest bird conservation. Kevin Winkler and Patricia Escalante.

NICARAGUA

- 137. Green turtle population on the Miskito Coast. Cynthia J. Lagueux.
- 138. Role of frugivorous birds in long-term conservation. Juan Carlos Martinez Sanchez.

- 139. Marine turtle ecology. Anne Meylan and Peter Meylan.
- 140. Wildlife use and park management. J. Samudio.
- 141. Buffer zone systems. Richard Condit.
- 142. Land and the indigenous people of eastern Panama. Peter Herlihy.
- 143. Medicinal plants and orientation manual. Rutilio Paredes Martinez.

PERU

- 144. Coastal wildlife conservation at Punta San Juan. Patricia Majluf.
- 145. Fisheries and marine mammal conflicts. Patricia Majluf and Cecilia Rivas.
- 146. Conservation education in fishing communities. Cecilia Rivas.
- 147. Humboldt penguin ecology. Carlos Zalavaga and Rosana Paredes.
- 148. Macaw ecology and conservation. Charles Munn.
- 149. Tambopata Reserve planning. Charles Munn.
- 150. Tambopata-Candamo macaw project. Eduardo Nycander and ACSS.

VINEZUELA

- 151. Rio Nichare rain-forest conservation. Philip Desenne and ACOANA.
- 152. Henri Pittier National Park support. Alejandro Grajal and Amigo del Parque Nacional Henri Pittier.

- 153. Student grants program. EcoNatura.
- 154. Parrot trade and conservation. Philip Desenne.
- 155. Orinoco crocodile conservation. John Thorbjarnarson and Gustavo Hernandez.
- 156. Anaconda ecology. Jesús Rivas, Maria Muñoz, John Thorbjarnarson, and Profauna.
- 157. National park management and training. José Ochoa, Alejandro Grajal, and EcoNatura.
- 158. Timber extraction and biodiversity corridors. José Ochoa.
- 159. Hunter education around national parks. José Lorenzo Silva.
- 160. Bird conservation in managed tropical forests. D. Mason.
- 161. Biocide use. G. Basili and Stanley Temple.
- 162. Yellow-shouldered Amazon ecology and conservation. Franklin Rojas-Suarez, Virginia Sanz, Mariana Albornoz, Provita, and Matilde Baglietto.
- 163. Tegu lizard ecology. Angela Schmitz.
- 164. Cebus biology and genetics. Ximena Valderrama.
- 165. Demographics and habitat of the great tinamou. Conrad Vispo.
- 166. Ethnoecology of the Ye'Kuana Indians, Claudia Knab.
- 167. River turtle ecology and management. T. Escalona.

REGIONAL

168. Paseo Pantera Cooperative Program (WCS/CCC/USAID). Archie Carr III, James Barborack, and Kathleen Jepson.

ASIA

CHINA

- 169. Small grants management program. William Bleisch.
- 170. Conservation project integration, Kunming Institute of Zoology. Ji Weizhi, Qui Ming Jiang, and William Bleisch.
- 171. Conservation education. Annette Berkovits and Thomas Naiman.
- 172. Panda conservation. Lu Zhi.
- 173. Analysis of wildlife trade and biodiversity status. Wang Sung.

INDIA

- 174. Langur conservation. Atul Gupta.
- 175. Carnivore ecology, Nagarhole National Park. Ullas Karanth.
- 176. Country-wide tiger surveys. Ullas Karanth.
- 177. Ecology of woodpeckers, Kerala. V. Santharam.
- 178. Conflict between local communities and a wildlife sanctuary, Kerala, Sultana Bashir.
- 179. Conservation of the great pied hornbill. Ragupathy Kannan

INTERNATIONAL CONSERVATION PROJECTS

- and Douglas James.
- 180. Ecology of seed dispersal in the lion-tailed macaque. R. Krishnamani.
- 181. Rainforest land tortoise. B.K. Sharath.
- 182. Non-timber forest regeneration. Aditi Sinha.
- 183. Migrant bird ecology. Madusudan Katti.

INDONESIA

- 184. Tropical ecology of northern Sulawesi. Margaret Kinnaird and Tim O'Brien.
- 185. Orangutan research and conservation training. Carel van Schaik.
- 186. Conservation biology of the babirusa in Sulawesi. Lvnn Marion Clayton.

LAOS

- 187. Conservation training and integrated management of protected areas. Asia Staff.
- 188. Wildlife surveys for key areas. Alan Rabinowitz and George Schaller.
- 189. Hydroelectric impact assessments. William Bleisch.
- 190. Community conservation. Michael Meredith.

MALAYSIA

- 191. Wildlife management, Sarawak and Sabah. Elizabeth Bennett.
- 192. Research and management training, Sarawak and Sabah. Alan Rabinowitz and Elizabeth Bennett.
- 193. Sumatran rhino surveys, Sabah. Ramesh Boonratana.
- 194. Conservation status of forest birds. Charles Francis.
- 195. Ecological study and management of game species, Sarawak and Sabah. Elizabeth Bennett and Jephte Sompod.
- 196. Effects of hunting on forest wildlife. Elizabeth Bennett and Adrian Nyaoi.

MONGOLIA

- 197. Gobi Desert research and conservation. George Schaller.
- 198. Snow leopard ecology. Thomas McCarthy.

MYANMAR

- 199. Wildlife surveys. Alan Rabinowitz and George Schaller.
- 200. Coordination and training programs. Tint Lwin Thaung, Alan Rabinowitz, and Elizabeth Bennett.
- PAPUA NEW GUINEA
- 201. Crater Mountain management plan. Seldon James.
- 202. Crater Mountain rural development. David Gillison, Samantha Gillison, and Seldon James.
- 203. Conservation biology training/small grants. Seldon

- James and Deborah Wright.
- 204. Palm cockatoo research. Donald Bruning and Christopher Filardi.
- 205. Wild canid ecology. R. Bino.
- 206. Landowner relations. John Ericho.
- 207. Megapode ecology. Ross Sinclair.

- 208. Tiger research and conservation in Far East, Hornocker Wildlife Research Institute.
- 209. Turtle ecology and conservation. Olga Leontyeva.

TAIWAN

210. Training and conservation. Alan Rabinowitz.

THAILAND

- 211. Tiger census. Alan Rabinowitz.
- 212. Small carnivore research in Huai Kha Khaeng/Thung Yai Wildlife Sanctuary. Saksit Sinichareon and Kathy Conforti.
- 213. Habitat fragmentation and forest animals. Anthony Lynam.
- TIBET AUTONOMOUS REGION
- 214. Wildlife surveys and reserve planning. George Schaller.
- 215. Southeast Tibet wildlife surveys. Kunming Institute of Zoology.
- 216. Conservation of black-necked crane (WCS/ICF). Mary Ann Bishop.

VIETNAM

- 217. Tiger surveys. Le Xuan Canh. REGIONAL
- 218. Trans-boundary conferences. Alan Rabinowitz and the Mac-Arthur Foundation.
- 219. Tiger Campaign. Alan Rabinowitz and Dorene Bolze

NORTH AMERICA

UNITED STATES

- 220. Adirondack and Northeast forest conservation. William Weber and Liza Graham.
- 221. Berkshire-Taconic bog turtle ecosystem study. Alison Whitlock.
- 222. Turtle recovery program. Michael Klemens.

GENETICS PROGRAM

- 223. Demography and population genetics of the Ngorongoro black rhinos, Tanzania. George Amato and Patricia Moehlman.
- 224. Subspecies and genetic partitioning in the black and white ruffed lemur, Malagasy Republic. George Amato, Hilary Simons Morland, and R. DeSalle.
- 225. Phylogenic relationships of the four endemic tortoises of Madagascar. George Amato, John Behler, and A. Caccone.
- LATIN AMERICA
- 226. Genetic divisions in wild popu-

- lations of caiman, Amazon Basin, George Amato, Peter Brazaitis, and J. Gatesy.
- 227. Subspecific analyses of the yellow-shouldered Amazon in Venezuela, George Amato, Alejandro Grajal, and William Karesh.

- 228. Molecular phylogenetics of Central Asian bovids. George Amato and George Schaller.
- 229. Using microsatellite markers to census tigers in India. George Amato and Ullas Karanth.
- 230. Phylogenetic relationships among Asian pigs, including the newly rediscovered Laotian warty hog. George Amato, George Schaller, and C. Groves.

REGIONAL

231. Population genetics of natural populations of humpback whales. H. Rosenbaum and George Amato.

VETERINARY FIELD PROGRAM

- 232. Python radio-transmitter surgical implantations, Cameroon. Bonnie Raphael.
- 233. Health evaluation of black-faced impala, Namibia. William Karesh, W. Green, and A. Rothstein.
- 234. Free-ranging savanna buffalo health assessment and monitoring, Zaire. William Karesh, K. Smith, and M. Atalia.
- 235. Free-ranging elephant assessment and monitoring. William Karesh, K. Smith, M. Atalia.
- 236. Advisor to Zaire Wildlife and National Parks Department. William Karesh.

LATIN AMERICA

- 237. Health survey of southern sea lions, Argentina. William Karesh and Robert Cook.
- 238. Health assessment of Magellanic penguins, Argentina. William Karesh, Robert Cook, and M. Uhart.
- 239. Health assessment of kelp gulls, Argentina, William Karesh and Robert Cook.
- 240. Health assessment of imperial cormorants, Argentina. William Karesh and Robert Cook.
- 241. Health assessment of guanaco, Argentina. William Karesh, Robert Cook, and M. Uhart.
- 242. Health assessment of rockhopper penguins, Argentina. William Karesh, Robert Cook, and M. Uhart.
- 243. Training for veterinarians and biologists, Argentina. William Karesh and Robert Cook.

- 244. Assessment of Patagonian wildlife health, William Karesh and Robert Cook.
- 245. Spider monkey immobilization, radio-collaring, and health evaluation, Bolivia, William Karesh.
- 246. Black caiman health evaluation, Bolivia. William Karesh.
- 247. Training Bolivian biologists in wildlife handling techniques. William Karesh.
- 248. Wildlife veterinarian training, Brazil. Robert Cook.
- 249. Pink River dolphin capture and handling review, Brazil. William Karesh.
- 250. Baird's tapir capture and radiocollaring techniques consulting, Costa Rica, William Karesh.
- 251. Anesthesia and handling of freeranging South American fur seals, Peru. William Karesh.
- 252. South American fur seal health assessment. William Karesh and Mark Stetter.
- 253. South American fur seal genetics. William Karesh.
- 254. South American fur seal immobilization services. William Karesh and Mark Stetter.
- 255. Humboldt penguin health assessment, Peru. William Karesh and Mark Stetter.
- 256. Free-ranging macaw health survev, Peru. William Karesh.
- 257. Free-ranging cebus monkey genetics consultant, Venezuela. William Karesh.
- 258. Margarita Island parrot release, Venezuela. William Karesh and A. Hoogesteijn.

ASIA

- 259. Avian parasite analysis, India. S. Rosenburg.
- 260. Consultant to Indonesian government, orangutan health and rehabilitation. William Karesh.
- 261. Geographic variation of genetic diversity in free-ranging orangutans. William Karesh.
- 262, Wildlife veterinarian training, Sabah, Malaysia. William Karesh.
- 263. Gibbon population and habitat viability analysis and rehabilitation consultation. Robert Cook.

Conservation POLICY PROGRAM

- 264. Ocean Wildlife Campaign (with 6 organizations). Dorene Bolze, Jonathan Hare, and Paul Boyle.
- 265. Asian advertising campaign for tiger. Dorene Bolze, Carmen Sandoe, and Peter Wilken.
- 266. Tiger Conservation Strategy: Policy WCS Report #3. Staff.
- 267. CITES and wildlife trade policy. Dorene Bolze and WCS Staff.



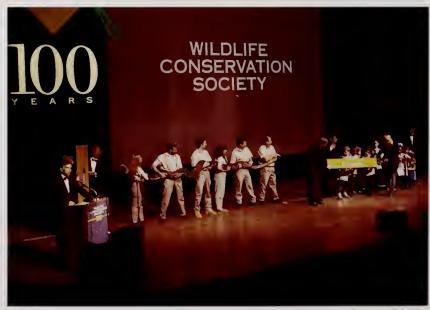
CELEBRATING THE SOCIETY'S CENTENNIAL



ANNUAL MEETING

April 24: In avery fisher Hall, president william CONWAY, ADVISOR JOHN DENVER, TRUSTEE DAILEY PATTEE, KLEPERS, AND CHILDREN PARTICIPATED IN THE GREAT SNAKE DEBATE (RIGHT), LATER THAT EVENING, AT THE CENTENNIAL DINNER CHAIRFD BY DAVID T. SCHIFF, CONWAY, PATTLE, WHO SERVED AS CHAIRMAN OF THE CENTENNIAL COMMITTEE, AND CHAIRMAN OF THE BOARD HOWARD PHIPPS, JR. CUT THE CLLEBRATORY CAKE (TOP), DIRECTOR FOR SCIENCE GEORGE SCHALLER AND TRUSTLE EDETH MCBEAN NEWBERRY JOINED ABOUT 300 OTHERS AT THE DINNER HONORING THE SOCIETY'S FOUNDING FAMILIES (ABOVE)

THE WILDLIFE CONSERVATION SOCIETY was founded as the New York Zoological Society 100 years ago, in 1895, by a group of public-spirited citizens. They planned to create a great zoo in New York, provide protection for vanishing wildlife, and promote education for the public. Those ideals have continued to evolve, and to be celebrated, at 25, 50, 75, and now 100 years. Events were scheduled for the entire year, beginning on April 24, 1995, with the annual meeting and continuing with proclamations, exhibit openings, foot races, parties, meetings, publications, public decor, and a conservation lecture series. They are documented in the following pages.







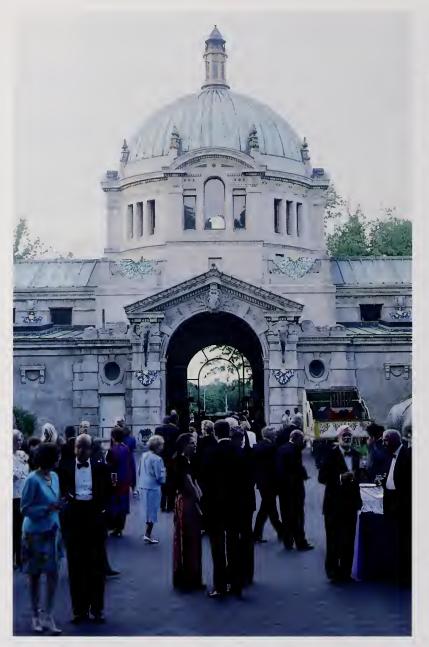


THE FIRST WEEK

April 25: At CITY HALL, CITY COUNCIL SPEAKER PETER VALLONE SPOKE AND CHILDREN FROM THE MIDTOWN ELEMENTARY SCHOOL PROVIDED AN ARTWORK FOR THE CITY'S PROCLAMATION HONORING THE SOCIETY (BELOW).

April 29: three events in one saturday—the tropicana RUN FOR WILDLIFE AROUND THE BRONX ZOO (ABOVE); THE 100TH BIRTHDAY PARTY, ALSO AT THE ZOO, WITH PRESIDENT CONWAY AND BRONX BOROUGH PRESIDENT FERDINAND FERRER (UPPER LEFT); AND THE DEBUT OF "FISH THAT GO ZAP!" AT THE AQUARIUM, WITH PRESIDENT, CEO, AND CHAIRMAN EUGENE MCGRATH OF CON EDISON (THE CHIEF FUNDER), NEW YORK CITY COMMISSIONER OF CULTURAL AFFAIRS SCHUYLER CHAPIN, AND WCS CHAIRMAN PHIPPS.





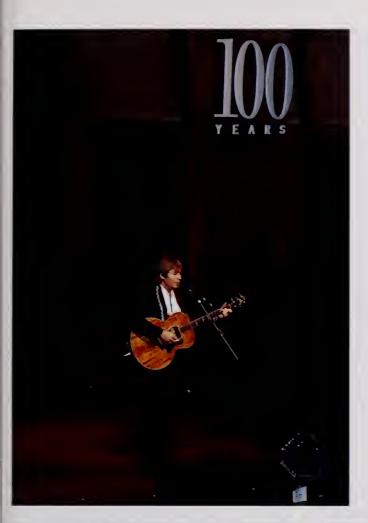




CENTENNIAL GALA

June 1: Guests gathered at the Keith W. Johnson ZOO CENTER (LEFT) AND OTHER BRONX ZOO SITES BEFORE THE CENTENNIAL DINNER, CHAIRED BY JANE AND JOHN IRWIN II (ABOVE, WITH DAVID SCHIFF) AND SALE AND ROBERT WOOD JOHNSON IV (LOWFR LEFT, WITH WILLIAM CONWAY, AND MAYOR AND MRS. RUDOLPH GIULIANI). CORPORATE CHAIRMAN FOR THE CELEBRATION WAS JULIAN H. ROBERTSON, JR. (LOWER RIGHT, WITH HOWARD PHIPPS, JR.).







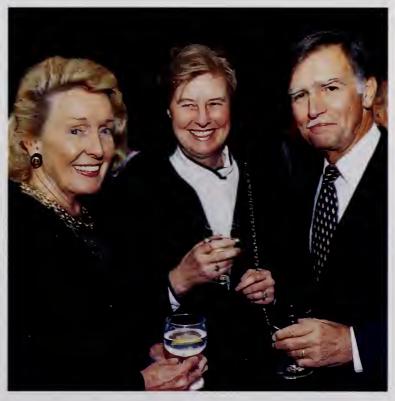
THE WILDLIFE CONCERT

June 18: Advisor John Denver's Double CD was produced by SONY MUSIC IN COLLABORATION WITH THE SOCIETY AND THE ELEMENT FOUNDATION (ABOVE). DENVER EARLIER SANG AT THE SOCIETY'S ANNUAL MEETING (LEFT).



CENTENNIAL LECTURE SERIES

February 7: DR. JARED DIAMOND, WITH TIME MAGAZINE WRITER EUGENE LINDEN AND WCS VICE PRESIDENT JOHN ROBINSON (ABOVE), GAVE THE FIRST IN A SERIES OF SIX LECTURES TITLED "CONSERVATION AT THE CROSSROADS," CO-CHAIRED BY NORMA DANA, WILLIAM CONWAY RIGHT, WITH CHRISTA CONWAY IN CENTER, AND ALAN WEEDEN.



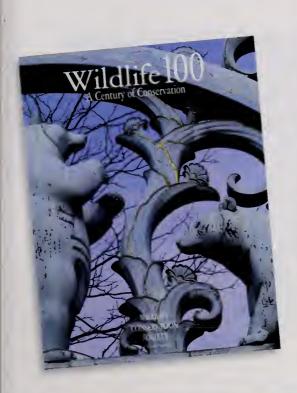




ON FIFTH AVENUE

June: Rockefeller Center's Channel Garden was TURNED OVER TO THE SOCIETY FOR THE MONTH (LEFT), WHILE WCS CENTENNIAL DISPLAYS ADORNED THE WINDOWS OF TIFFANY'S (BELOW LEFT), ASCOT CHANG (BELOW), SALVATORE FERRAGAMO, BULGARI, VAN CLEEF & ARPELS, HERMES, BUCCELLATI, ASPREY, AND OTHER STORES.







WILDLIFE 100

June: Adviser John S. Newberry and Trustee ann unterberg (Above) Headed THE COMMITTEE FOR WILDLIFE 100, THE 48-PAGE CENTENNIAL JOURNAL PRODUCED EOR AVENUE MAGAZINE (LEFT).



THE WILDLIFE MURAL

November 1994: In the middle of the society's 100th year, internationally renowned URBAN ARTIST JOHN "CRASH" MATOS AND HIS TEAM CREATED A 9,300-SQUARE-FOOT CENTENNIAL MURAL IN THE BRONXDALE UNDERPASS.



INDIAN GHARIAL IN JUNGLEWORLD

ANIMAL CENSUS (at Dec. 31, 1994)

Bronx Zoo (Wildlife Conservation Park)

| Mammals | Species and subspecies | Specimens owned | Births/ Hatchings | Gruit |
|-------------------------------------|------------------------|--------------------|----------------------|---------|
| Marsupialia—Kangaroos, gliders | 3 | 3 | 60 | Char |
| Insectivora—Hedgehogs, tree shrews | 2 | 6 | 1 | Colu |
| Chiroptera—Bats | 6 | 339 | 159 | Psitta |
| Primates—Apes, monkeys, | | | | Cucu |
| marmosets, etc. | 30 | 194 | 20 | c |
| Edentata—Sloths | 1 | 1 | 0 | Strigi |
| Rodentia—Squirrels, rats, gerbils, | | | | Capr |
| porcupines, etc. | 37 | 477 | 266 | Colii |
| Carnivora—Bears, cats, dogs, etc. | 20 | 73 | 7 | Cora |
| Pinnipedia—Sea lions | 1 | 5 | 0 | re |
| Proboscidea—Elephants | 1 | 7 | 0 | Picifo |
| Hyracoidea—Hyraxes | 1 | 9 | 8 | W |
| Perissodactyla—Horses, rhinos, etc. | 5 | 52 | 1 | Passe |
| Artiodactyla—Cattle, sheep, deer, | | | | Totals |
| antelope, etc. | 26 | 404 | 69 | |
| Totals | 133 | 1,605 | 531 | REPTILI |
| | | | | Chele |
| Birds | | | | Croc |
| Struthioniformes—Ostriches | 1 | 2 | 0 | C |
| Rheiformes—Rheas | 1 | 1 | 0 | Squa |
| Casuariiformes—Cassowaries, emu | 3 | 5 | 0 | Squa |
| Sphenisciformes—Penguins | 1 | 9 | 0 | Cauc |
| Pelicaniformes-Pelicans, | | | | Anur |
| cormorants, etc. | 4 | 2 | 10 | Totals |
| Ciconiiformes—Herons, storks, | | | | |
| flamingos, etc. | 11 | 116 | 4 | Bronx Z |
| | | | | |

| Anseriformes—Swans, ducks, | | | |
|--------------------------------------|-----|-------|-----|
| geese, screamers | 34 | 187 | 18 |
| Falconiformes—Vultures, eagles | 6 | 11 | (|
| Galliformes—Maleos, curassows, | | | |
| pheasants, etc. | 20 | 101 | 13 |
| Gruiformes—Cranes, rails, etc. | 14 | 67 | 3 |
| Charadriiformes—Plovers, gulls, etc. | 17 | 106 | 10 |
| Columbiformes—Pigeons, doves | 13 | 33 | 7 |
| Psittaciformes—Parrots | 24 | 53 | (|
| Cuculiformes—Touracos, | | | |
| cuckoos, etc. | 5 | 14 | 12 |
| Strigiformes—Owls | 3 | 4 | (|
| Caprimulgiformes—Frogmouths | 3 | 0 | |
| Coliiformes—Mousebirds | 1 | 1 | (|
| Coraciiformes—Kingfishers, bee-eater | rs, | | |
| rollers, hornbills, etc. | 15 | 48 | 4 |
| Piciformes—Barbets, toucans, | | | |
| woodpeckers | 4 | 6 | (|
| Passeriformes—Perching birds | 66 | 180 | 1(|
| Totals | 244 | 968 | 80 |
| REPTILES AND AMPHIBIANS | | | |
| Chelonia—Turtles | 49 | 463 | 39 |
| Crocodylia—Alligators, caimans, | | | |
| crocodiles | 10 | 279 | 7 |
| Squamata (Sauria)—Lizards | 28 | 85 | 1 |
| Squamata (Serpentes)—Snakes | 39 | 169 | 4 |
| Caudata—Salamanders | 2 | 5 | (|
| Anura—Frogs, toads | 20 | 126 | 273 |
| Totals | 148 | 1,127 | 324 |
| Bronx Zoo Totals | 525 | 3,700 | 935 |
| | | | |

CHILDREN'S ZOO, BRONX ZOO

| Mammals | Species and subspecies | Specimens owned | Births/ Hatchings |
|------------------------------------|------------------------|--------------------|----------------------|
| Marsupialia—Wallabies | 1 | 8 | 1 |
| Insectivora—Hedgehogs | 2 | 9 | 0 |
| Chiroptera—Bats | 1 | 1 | 0 |
| Primates—Lemurs | 1 | 8 | 2 |
| Edentata—Armadillos | 2 | 3 | 0 |
| Lagomorpha—Rabbits | 1 | 15 | 0 |
| Rodentia—Squirrels, rats, beavers, | | | |
| porcupines, etc. | 12 | 47 | 1 |
| Carnivora—Foxes, otters, etc. | 7 | 16 | 0 |
| Perissodactyla—Horses | 2 | 6 | 0 |
| Artiodactyla—Goats, sheep, | | | |
| camels, etc. | 6 | 58 | 7 |
| Totals | 35 | 171 | 11 |
| Birds | | | |
| Pelecaniformes—Pelicans | 2 | 5 | 0 |
| Ciconiiformes—Herons | 1 | 15 | 0 |
| Anseriformes—Ducks, geese | 9 | 43 | 0 |
| Falconiformes—Vultures, | | | |
| hawks, etc. | 3 | 3 | 0 |
| Galliformes—Chickens, bobwhites | 2 | 38 | 2 |
| Columbiformes—Doves | 2 | 3 | 0 |
| Psittaciformes—Parrots | 15 | 23 | 0 |
| Strigiformes—Owls | 4 | 11 | 2 |
| Caprimulgiformes—Frogmouths | 1 | 1 | 0 |
| Passeriformes—Perching birds | 1 | 1 | 0 |
| Totals | 40 | 143 | 4 |
| REPTILES AND AMPHIBIANS | | | |
| Chelonia—Turtles | 7 | 38 | 0 |
| Crocodylia—Alligators | 1 | 12 | 0 |
| Squamata (Sauria)—Lizards | 8 | 31 | 0 |
| Squamata (Serpentes)—Snakes | 9 | 37 | 0 |
| Anura—Frogs, toads | 3 | 11 | 0 |
| Totals | 22 | 91 | 0 |
| | | | |

ST. CATHERINES WILDLIFE SURVIVAL CENTER, GEORGIA

Children's Zoo Census

| Mammals | Species and subspecies | Specimens owned | Births/ Hatchings |
|---------------------------|------------------------|--------------------|----------------------|
| Marsupialia—Wallabies | 1 | 11 | 0 |
| Primates—Lemurs, macaques | 4 | 52 | 9 |
| Perissodactyla—Zebras | 1 | 13 | 0 |
| Artiodactyla—Antelope | 8 | 95 | 19 |
| Totals | 14 | 171 | 28 |

405

15

BIRDS

| Ciconiiformes—Storks | 2 | 8 | () |
|---------------------------------|----|-----|----|
| Galliformes—Pheasants | 7 | 22 | 1 |
| Gruiformes—Cranes, bustards | 10 | 65 | 4 |
| Columbiformes—Pigeons | 1 | 1 | 0 |
| Psittaciformes—Parrots | 12 | 52 | 13 |
| Coraciiformes—Hornbills | 5 | 12 | 2 |
| Totals | 37 | 160 | 20 |
| REPTILES | | | |
| Testudinata—Turtles | 3 | 94 | 7 |
| Squamata (Serpentes)—Snakes | 1 | 2 | 0 |
| Totals | 4 | 96 | 7 |
| Wildlife Survival Center Census | 55 | 427 | 55 |

CENTRAL PARK WILDLIFE CENTER

| Mammals | Species and subspecies | Specimens owned | Births/ Hatchings |
|------------------------------|------------------------|--------------------|----------------------|
| Chiroptera—Bats | 2 | 115 | 0 |
| Primates—Monkeys | 4 | 29 | 2 |
| Rodentia—Acouchis, squirrels | 1 | 2 | 0 |



SNOW LEOPARD AT HIMALAYAN HIGHLANDS

| Primipelia—Spals, sea licens | Carnivora—Bears, otters, | | | | REPTILES | | | |
|--|-------------------------------------|-------------|-----------|-----------|--------------------------------------|---------|-----------|-----|
| BIRDS | pandas | 4 | 8 | 2 | Chelonia—Turtles | 3 | 37 | 0 |
| Spice Spic | Pinnipedia—Seals, sea lions | 1 | 3 | 0 | Squamata (Serpentes)—Snakes | 3 | 4 | 0 |
| Spheniscitormiss—Penguins American Serior | Totals | 12 | 157 | 4 | Totals | 6 | 41 | 0 |
| Sphenisciformies—Penquins American Service Sphenisciformies—Swams Chardariformies—Swams Chardariformies—Pentrides Francisco | Rights | | | | Queens Wildlife Center Census | 54 | 399 | 72 |
| Auscriforms—Swans, | | 3 | 24 | 3 | Queens whalle center census | 34 | 3// | / = |
| Description Company | | J | | 3 | | | | |
| Californes—Patridges, tragopans 2 3 0 MAMMALS Speciment Charadinfornes—Pittres 1 1 0 0 MAMMALS Speciment Charadinfornes—Pittres 1 34 2 Marsupalia—Wallables 1 2 4 4 1 2 4 4 1 4 4 4 4 4 4 4 | | 4 | 11 | 1 | Prospect Park Wildlife O | Center | | |
| Gruiformes-Bitterns | . 0 | | | | | | | |
| Charadriformes=Puffins | | 1 | 1 | 0 | Mammals | • | | |
| Columbiformes—Doves, pigeons 2 1 2 Primates—Tamarins, haboons 2 3 4 0 Partaciformes—Parrots 2 9 8 Lagomorpha—Rabbirs 2 4 0 Partaciformes—Turacos 2 4 0 Paciformes—Turacos 1 2 0 Rodentia—Partinic dogs, gerbils, Paseriformes—Perching birds 19 60 30 Carnivora—Pandas, merck ats 3 8 0 Totals 37 149 44 Principedia—Sca lions 1 3 0 Partaciformes—Perching birds 14 0 0 Chelonia—Turdes 8 74 0 Totals 25 116 48 Crecodifia—Caman 1 3 0 Crecodifia—Caman 1 3 0 Crecodifia—Caman 1 3 0 Squamata Sauria—Lizards 18 229 18 BRDS 12 Central Park Wildlife Center Census 13 950 112 Central Park Wildlife Center Census 10 8 90 MAMMALS Specimen Specimen Specimen Specimen Subspecies 4 10 Camporipha—Rabbits 1 6 0 Mammals Lagron 1 27 15 AQUARIUM FOR WILDLIFE CONSERVATION Considernes—Errec 1 27 15 AQUARIUM FOR WILDLIFE CONSERVATION Considernes—Errec 1 27 15 AQUARIUM FOR WILDLIFE CONSERVATION Carnoformes—Errec 1 20 Principedia—Scalis, scalibors, wall was 5 5 21 Carnoformes—Errec 1 20 Principedia—Scalis, scalibors, wall was 5 5 21 Carnoformes—Errec 1 20 Principedia—Scalis, scalibors, wall was 5 5 21 Carnofor | Charadriiformes—Puffins | 1 | 34 | 2 | Marsupialia—Wallabies | | 12 | |
| Cuculiformes—Turacos 2 | Columbiformes—Doves, pigeons | 2 | 1 | 2 | | 2 | 5 | 0 |
| Pictformes—Toucans | Psittaciformes—Parrots | 2 | 9 | 8 | Lagomorpha—Rabbits | 2 | 4 | 0 |
| Passeriformes—Perching birds 19 60 30 Carnivora—Pandas, meerkats 3 8 0 | Cuculiformes—Turacos | 2 | 4 | 0 | Rodentia—Prairie dogs, gerbils, | | | |
| Printage 1 | Piciformes—Toucans | 1 | 2 | 0 | mice, etc. | 11 | 67 | 42 |
| REPTILIS AND AMPHIBIANS | Passeriformes—Perching birds | 19 | 60 | 30 | Carnivora—Pandas, meerkats | 3 | 8 | 0 |
| REPTILES AND AMPHIBIANS | Totals | 37 | 149 | 44 | Pinnipedia—Sea lions | 1 | 3 | 0 |
| Chelonia—Turtles 8 74 0 Totals 25 116 48 Crocodylia—Caiman 1 3 0 Totals 25 116 48 Squamata Sauria—Lizards 18 229 18 BIRDS Squamata Serpentes—Snakes 9 33 0 Casuariformes—Emmu 1 2 0 Anura—Toads and frogs 20 316 46 Ciconiformes—Herons 1 9 5 Totals 54 644 64 Anseriformes—Geese, ducks 5 13 0 Central Park Wildlife Center Census 103 950 112 Galliformes—Bobwhites, pheasants, t.s. 4 15 0 Central Park Wildlife Center Census 103 950 112 Galliformes—Bobwhites, pheasants, t.s. 4 15 0 QUEENS WILDLIFE CENTER 5 Specimens Birthy Totals 1 2 0 MAMMALS 5 Specimens Birthy Totals 2 1 8 | | | | | Hyracoidea—Hyrax | 1 | 6 | 2 |
| Crocodylia—Caiman 1 3 0 Squamata Sauria—Lizards 18 229 18 BIRDS Squamata Sauria—Lizards 9 33 0 Casuaritformes—Emu 1 2 0 Anura—Toads and frogs 20 316 46 Giconiformes—Herons 1 9 5 Totals 54 644 64 Anseriformes—Geese, ducks 5 13 0 Central Park Wildlife Center Census 103 950 112 Galliformes—Bobwhites, pheasants, ets. 4 15 0 Central Park Wildlife Center Census 103 950 112 Galliformes—Bobwhites, pheasants, ets. 4 15 0 Central Park Wildlife Center Census 103 950 112 Galliformes—Bobwhites, pheasants, ets. 4 15 0 QUEENS WILDLIFE CENTER 5 950 112 Passeriformes—Dows 1 15 0 MAMMALS Specius and subjectes Specius and subjectes Birth√ Passeriformes—Perching birds 4 28 0 | REPTILES AND AMPHIBIANS | | | | Artiodactyla—Cows, goats, sheep | 4 | 11 | 0 |
| Squamata Sauria—Lizards 18 229 18 BIRDS | Chelonia—Turtles | 8 | 74 | 0 | Totals | 25 | 116 | 48 |
| Squamata Serpentes—Snakes 9 33 0 Casuariiformes—Emu 1 2 0 Anura—Toads and frogs 20 316 46 Ciconiiformes—Herons 1 9 5 Totals 54 644 644 64 Anseriformes—Gese, ducks 5 13 0 Central Park Wildlife Center Census 103 950 112 Galliformes—Bolwhites, pheasants, ets. 4 15 0 Central Park Wildlife Center Census 103 950 112 Galliformes—Bolwhites, pheasants, ets. 4 15 0 Central Park Wildlife Center Census 103 950 112 Galliformes—Bolwites, pheasants, ets. 4 15 0 QUEENS WILDLIFE CENTER 1 5 Specimen subsection 1 2 0 1 2 0 MAMMALS Species and subsection 1 6 0 Passeriformes—Perching birds 4 28 0 Lagomorpha—Ralbits 1 6 0 REPTILES AND AMPHIBIANS <t< td=""><td>Crocodylia—Caiman</td><td>1</td><td>3</td><td>0</td><td></td><td></td><td></td><td></td></t<> | Crocodylia—Caiman | 1 | 3 | 0 | | | | |
| Anura—Toads and frogs 20 316 46 Ciconiformes—Herons 1 9 5 | Squamata Sauria—Lizards | 18 | 229 | 18 | Birds | | | |
| Totals 54 644 64 Anseriformes—Geee, ducks 5 13 0 Central Park Wildlife Center Census 103 950 112 Falconiformes—Bobwhites, pheasants, ets. 4 15 0 Columbiformes—Doves 1 8 0 Psittaciformes—Doves 1 8 0 Psittaciformes—Doves 1 8 0 Psittaciformes—Doves 1 8 0 Psittaciformes—Parrots 3 8 2 MAMMALS Species and subspecies owned Births/Hatchings 1 2 0 Rodentia—Prairie dogs 2 14 5 REPTILES AND AMPHIBIANS 1 2 2 Carnivora—Pumas, bears, 1 4 0 Squamata Sauria—Lizards 4 17 2 Pinnepedia—Sea lions 1 4 0 Squamata Serpentes—Snakes 5 7 0 Perissodactyla—Horses 2 2 0 Anura—Frogs 2 2 1 0 | Squamata Serpentes—Snakes | 9 | 33 | 0 | Casuariiformes—Emu | 1 | 2 | 0 |
| Falconiformes—Eagles 1 | Anura—Toads and frogs | 20 | 316 | 46 | Ciconiiformes—Herons | 1 | 9 | 5 |
| Central Park Wildlife Center Census 103 950 112 Galliformes—Bobwhites, pheasants, et. 4 15 0 QUEENS WILDLIFE CENTER I I 8 0 QUEENS WILDLIFE CENTER Species and subspecies Speciments owned Births/ owned Passeriformes—Parrots 3 8 2 MAMMALS Species and subspecies Speciments owned Births/ owned Passeriformes—Perching birds 4 28 0 Lagomorpha—Rabbits 1 6 0 Totals 21 86 7 Lagomorpha—Rabbits 1 6 0 REPTILES AND AMPHIBIANS Image: Cell of the part of the par | Totals | 54 | 644 | 64 | Anseriformes—Geese, ducks | 5 | 13 | 0 |
| Columbiformes—Doves 1 8 0 | | | | | Falconiformes—Eagles | 1 | 1 | 0 |
| Postaciformes—Parrots 3 8 2 | Central Park Wildlife Center Census | 103 | 950 | 112 | Galliformes—Bobwhites, pheasants, | ets. 4 | 15 | 0 |
| MAMMALS | | | | | Columbiformes—Doves | I | 8 | 0 |
| MAMMALS Species and subspecies Speciment subspecies Births/ owned Passeriformes—Perching birds 4 28 0 Lagomorpha—Rabbits 1 6 0 REPTILES AND AMPHIBIANS Carnivora—Pumas, bears, - - Chelonia—Turtles 5 36 0 bobcats, coyotes 4 10 0 Squamata Sauria—Lizards 4 17 2 Pinnepedia—Sea lions 1 4 0 Squamata Serpentes—Snakes 5 7 0 Perissodactyla—Horses 2 2 0 Anura—Frogs 2 21 0 Artiodactyla—Elk, bison, goats, sheep 6 37 2 7 0 16 81 2 Totals 16 73 8 Prospect Park Wildlife Center Census 62 283 57 BIRDS Ciconinformes—Egrets 1 27 15 AQUARIUM FOR WILDLIFE CONSERVATION Ansertformes—Eagles 1 1 0 MARINE MAMMALS Specimens | | | | | Psittaciformes—Parrots | 3 | 8 | 2 |
| MAMMALS Subspecies and speciments Burths | QUEENS WILDLIFE CENTER | | | | Strigiformes—Owls | 1 | 2 | 0 |
| Lagomorpha—Rabbits | | Species and | Specimens | Births/ | Passeriformes—Perching birds | 4 | 28 | 0 |
| Rodentia—Prairie dogs 2 | Mammals | subspecies | owned | Hatchings | Totals | 21 | 86 | 7 |
| Carnivora—Pumas, bears, Chelonia—Turtles 5 36 0 bobcats, coyotes 4 10 0 Squamata Sauria—Lizards 4 17 2 Pinnepedia—Sea lions 1 4 0 Squamata Serpentes—Snakes 5 7 0 Perissodactyla—Horses 2 2 2 0 Anura—Frogs 2 2 11 0 Artiodactyla—Elk, bison, goats, sheep 6 37 2 7 0 | | 1 | 6 | 0 | | | | |
| bobcats, coyotes | · · | 2 | 14 | 5 | | | | |
| Pinnepedia—Sea lions 1 4 0 Squamata Serpentes—Snakes 5 7 0 Perissodactyla—Horses 2 2 0 Anura—Frogs 2 21 0 Artiodactyla—Elk, bison, | | | | | | | | |
| Perissodactyla—Horses 2 2 0 Anura—Frogs 2 21 0 Artiodactyla—Elk, bison, goats, sheep 6 37 2 Totals 16 73 8 Prospect Park Wildlife Center Census 62 283 57 BIRDS Ciconiiformes—Egrets 1 27 15 AQUARIUM FOR WILDLIFE CONSERVATION Ansertformes—Ducks, geese 24 216 45 Falconiformes—Eagles 1 1 0 Marine Mammai 5 Species Specimens Galliformes—Turkeys 2 19 0 Pinnipedia—Seals, sea lions, walrus 5 21 Grufformes—Cranes 1 2 0 Carnivora—Sea otters 1 4 | | 4 | | | | | | |
| Artiodactyla—Elk, bison, goats, sheep 6 37 2 Totals 16 73 8 Prospect Park Wildlife Center Census 62 283 57 BIRDS Ciconiuformes—Egrets 1 27 15 AQUARIUM FOR WILDLIFE CONSERVATION Ansertformes—Ducks, geese 24 216 45 Falconiformes—Eagles 1 1 0 MARINE MAMMAIS Species Specimens Galliformes—Turkeys 2 19 0 Pinnipedia—Seals, sea lions, walrus 5 21 Grutformes—Cranes 1 2 0 Carnivora—Sea otters 1 4 | | | | | | | | |
| goats, sheep 6 37 2 Totals 16 73 8 Prospect Park Wildlife Center Census 62 283 57 BIRDS Ciconiuformes—Egrets 1 27 15 AQUARIUM FOR WILDLIFE CONSERVATION Ansertformes—Ducks, geese 24 216 45 Falconiformes—Eagles 1 1 0 MARINE MAMMAIS Species Specimens Galliformes—Turkeys 2 19 0 Pinnipedia—Seals, sea lions, walrus 5 21 Grutformes—Cranes 1 2 0 Carnivora—Sea otters 1 4 | | 2 | 2 | 0 | · · | | | |
| Totals 16 73 8 Prospect Park Wildlife Center Census 62 283 57 BIRDS Ciconiuformes—Egrets 1 27 15 AQUARIUM FOR WILDLIFE CONSERVATION Ansenformes—Ducks, geese 24 216 45 Falconiformes—Eagles 1 1 0 MARINE MAMMALS Species Specimens Galliformes—Turkeys 2 19 0 Pinnipedia—Seals, sea lions, walrus 5 21 Gruformes—Cranes 1 2 0 Carnivora—Sea otters 1 4 | | | | | Totals | 16 | 81 | 2 |
| BIRDS Ciconitformes—Egrets 1 27 15 AQUARIUM FOR WILDLIFE CONSERVATION Ansertformes—Ducks, geese 24 216 45 Falconiformes—Eagles 1 1 0 MARINE MAMMALS Species Specimens Galliformes—Turkeys 2 19 0 Pinnipedia—Seals, sea lions, walrus 5 21 Grutformes—Cranes 1 2 0 Carnivora—Sea otters 1 4 | · · | | | | | | *** | |
| Ciconiuformes—Egrets 1 27 15 AQUARIUM FOR WILDLIFE CONSERVATION Ansenformes—Ducks, geese 24 216 45 Falconiformes—Eagles 1 1 0 MARINE MAMMAI S Species Specimens Galliformes—Turkeys 2 19 0 Pinnipedia—Seals, sea lions, walrus 5 21 Gruformes—Cranes 1 2 0 Carnivora—Sea otters 1 4 | Totals | 16 | 73 | 8 | Prospect Park Wildlife Center Census | 62 | 283 | 57 |
| Anseriformes—Ducks, geese 24 216 45 Falconiformes—Eagles 1 1 0 MARINE MAMMAIS Species Specimens Galliformes—Turkeys 2 19 0 Pinnipedia—Seals, sea lions, walrus 5 21 Gruiformes—Cranes 1 2 0 Carnivora—Sea otters 1 4 | Birds | | | | | | | |
| Falconiformes—Eagles 1 1 0 MARINE MAMMAIS Species Specimens Galliformes—Turkeys 2 19 0 Pinnipedia—Seals, sea lions, walrus 5 21 Gruiformes—Cranes 1 2 0 Carnivora—Sea otters 1 4 | Ciconiuformes—Egrets | I | 27 | 1.5 | Aquarium for Wildlife (| Conserv | ATION | |
| Galliformes—Turkeys 2 19 0 Pinnipedia—Seals, sea lions, walrus 5 21 Gruformes—Cranes 1 2 0 Carnivora—Sea otters 1 4 | Anseriformes—Ducks, geese | 24 | 216 | 45 | | | | |
| Gruiformes—Cranes 1 2 0 Carnivora—Sea otters 1 4 | Falconiformes—Eagles | 1 | 1 | 0 | Marine Mammais | Species | Specimens | |
| | Galliformes—Turkeys | 2 | 19 | 0 | Pinnipedia—Seals, sea lions, walrus | 5 | 21 | |
| Passeriformes—Perching birds 3 20 4 Cetacea—Whales, dolphins 2 9 | Gruiformes—Cranes | 1 | 2 | 0 | | | | |
| | · · | 3 | 20 | 4 | | | | |
| Totals 32 285 64 Totals 8 34 | Totals | 32 | 285 | 64 | Totals | 8 | 34 | |



WALRUSES AT SEA CLIFFS

| Birds | | | Lophiiformes—Goosefish | 1 | 5 | |
|-------------------------------------|---------|-----|---|-----|-------|--|
| Sphenisciformes—Penguins | 1 | 41 | Beloniformes—Ricefish | 1 | 6 | |
| | | | Cypriondontiformes—Swordtails, | | | |
| REPTILES | | | killifish | 23 | 563 | |
| Chelonia—Sea turtles | 7 | 15 | Characiformes—Tetras, cavefish | | 1,117 | |
| Crocodylia—Caiman | 1 | 3 | Scorpaeniformes—Scorpionfish, | | | |
| Totals | 8 | 18 | rockfish | 10 | 21 | |
| | | | Gymnotiformes—Knifefish | 4 | 22 | |
| Amphibians | | | Siluriformes—Catfish | 10 | 17 | |
| Amphibia | 3 | 8 | Atheriniformes—Silversides, | | | |
| | | | rainbowfish | 5 | 222 | |
| Fishes | | | Beryciformes—Squirrelfishes, | | | |
| Chondrichthyes—Cartilaginous fishes | | | flashlight fish | 2 | 7 | |
| Heterodontiformes—Horn shark | 1 | 1 | Gasterosteiformes—Seahorses, pipefish 2 | | | |
| Lamniformes—Mackeral sharks | 1 | 10 | Perciformes—Perches, sea basses, porgies, | | | |
| Carcharhiniformes—Ground sharks | 7 | 18 | cichlids, tang, clownfish, butterfish, | | | |
| Orectolobiformes—Carpet sharks | 2 | 4 | angelfish, wrasse, chromis, parrotfish, | | | |
| Rajiformes—Rays, skates | 9 | 68 | batfish, grouper, cardinal, | | | |
| Totals | 20 | 101 | damsel, flagtail goby, anthius | 166 | 2,354 | |
| | | | Pleuronectiformes—Flatfishes | 4 | 17 | |
| Osteichthyes—Bony fishes | | | Tetraodontiformes—Puffers, boxfish, | | | |
| Lepidosireniformes—Lungfishes | 1 | 1 | triggerfish, filefish | 6 | 12 | |
| Ceratodontiformes—Australian lungf | ishes 1 | 3 | Totals 2 | 272 | 4,549 | |
| Acipenseriformes—Sturgeons | 1 | 1 | | | | |
| Elopiformes—Tarpon, bonefish | 1 | 3 | Invertebrates | | | |
| Anguilliformes—Eels, morays | 4 | 6 | Cnidaria—Corals, anemones | 57 | 3,798 | |
| Osteoglossiformes—Arawana, arapai | ma 8 | 25 | Arthropoda—Lobsters, shrimps, crabs | 10 | 81 | |
| Salmoniformes—Trouts | 2 | 107 | Mollusca—Snails, bivalves, octopus | 13 | 270 | |
| Cypriniformes—Minnows, carp, | | | Echinodermata—Starfish, sea urchins | 22 | 34 | |
| cavefish, piranha, tetra | 5 | 20 | Totals 102 | | 4,183 | |
| Batrachoidiformes—Toadfishes | 1 | 7 | | | | |
| Gadiformes—Codfish | 2 | 6 | Aquarium Census 3 | 394 | 8,934 | |

Overall, the Wildlife Conservation Society had a good year. Although operating expenditures exceeded operating revenues by \$1 million the results represent the lowest operating deficit in seven years.

City, State, and Federal government sources provided 36 percent of operating revenue. Admissions and visitor-related spending provided 34 percent. Combined attendance at the five WCS-operated New York facilities was more than 4.1 million visitors.

Contributed support and membership amounted to 21 percent of revenues. In addition, \$3.5 million in bequests were added to the Society's funds functioning as endowment. Endowment and other investment income provided 4 percent of operating support and revenue.

As a result of strict cost controls, operating expenditures were level when compared to last year. Program and guest service costs were 84 percent. Membership, management and general, and fund-raising accounted for the balance.

Capital improvement expenditures at the Bronx Zoo included planning and design costs for the Congo Gorilla Forest exhibit. A fall groundbreaking was planned. Ongoing improvements at World of Birds continued as part of a multi-year rehabilitation program funded by the Lila Acheson Wallace Fund. A third engine was added to the Zoo's cogeneration plant, and numerous infrastructure repairs were completed. At the Aquarium a new and expanded Aquatheater was opened in late spring.

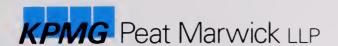
WCS reserves were strengthened by a nearly 20 percent total return on endowment funds.



FREDERICK A. MELHADO
TREASURER

FINANCIAL HIGHLIGHTS (in millions)

| Revenues | \$66.3 |
|--------------------------------------|--------|
| Expenditures | 67.3 |
| Deficit | 1.0 |
| Major sources of revenue: | |
| City, State, and Federal government | 23.7 |
| Admissions and visitor spending | 22.6 |
| Contributed support and membership | 13.8 |
| Endowment income | 4.4 |
| Major expenditures: | |
| Programs | 51.1 |
| Guest services | 5.6 |
| Supporting services | 10.6 |
| New Construction | |
| Bronx Zoo/Wildlife Conservation Park | 3.8 |
| Aquarium | .3 |
| Central Park Wildlife Center | .4 |
| Endowment Funds | |
| Market value | 102.3 |
| Total return on endowment | 19.9% |



345 Park Avenue New York, NY 10154

INDEPENDENT AUDITORS' REPORT

The Board of Trustees Wildlife Conservation Society:

We have audited the accompanying balance sheet of Wildlife Conservation Society as of June 30, 1995, and the related statements of support and revenue, expenditures, capital additions and changes in fund balances, and cash flows for the year then ended. These financial statements are the responsibility of the Society's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

As explained in note 2 to the financial statements, expenditures for land, buildings and equipment are not capitalized; therefore, depreciation of buildings and equipment is not recorded. The effect of this departure from generally accepted accounting principles on the financial statements is not readily determinable.

In our opinion, except for the effect on the financial statements of the matter discussed in the preceding paragraph, the financial statements referred to above present fairly, in all material respects, the financial position of Wildlife Conservation Society as of June 30, 1995, and the results of its operations and its cash flows for the year then ended in conformity with generally accepted accounting principles.

KPMG leat Marwick LXP

November 13, 1995



WILDLIFE CONSERVATION SOCIETY

BALANCE SHEET JUNE 30, 1995

| Assets | OPERATING FUR | NDS ENDOWMENT FUNDS |
|--|---------------|---------------------|
| Cash, including interest-bearing amounts of \$19,431,435 | \$ 20,216,7 | 47 – |
| Investments (note 3) | 45,070,0 | 48 57,184,591 |
| Accounts receivable | 5,634,1 | 02 – |
| Grants and pledges receivable | 10,757,5 | 27 – |
| Inventories, at lower of cost or market | 796,6 | 43 |
| Prepaid expenses and deferred charges | 1,615,1 | <u></u> |
| | \$84,090,1 | 96 57,184,591 |
| Liabilities and Fund Balances | | |
| Accounts payable and accrued expenses | 9,569,2 | 27 – |
| Deferred restricted support and revenue (note 5) | 28,119,9 | |
| | 37,689,1 | 29 |
| Fund balances: | | |
| Unrestricted: | | |
| Designated for long-term investment | 45,070,0 | 48 – |
| Undesignated | 1,331,0 | 19 – |
| Endowment: | | |
| Income restricted | | - 21,991,067 |
| Income unrestricted | | _ 35,193,524 |
| | 46,401,0 | 57,184,591 |
| | \$ 84,090,1 | 96 57,184,591 |

See accompanying notes to financial statements.

WILDLIFE CONSERVATION SOCIETY

STATEMENT OF SUPPORT AND REVENUE, EXPENDITURES, CAPITAL ADDITIONS AND CHANGES IN FUND BALANCIS YEAR ENDED JUNE 30, 1995

| | | OPERATING FUNDS | | ENDOWMENT FUNDS |
|--|-----------------|-----------------|-------------|-----------------|
| | General | Capital | Total | |
| Operating support and revenue: | | | | |
| Contributions and fund raising events, net | \$ 7,107,818 | 679,954 | 7,787,772 | - |
| Wallace Fund (notes 5 and 9) | 3,076,215 | 3,006,009 | 6,082,224 | - |
| Government support: | | | | |
| City of New York | 18,771,158 | 108,927 | 18,880,085 | - |
| State of New York | 1,761,422 | - | 1,761,422 | - |
| Federal sources | 3,171,234 | - | 3,171,234 | - |
| Admission fees | 8,608,730 | - | 8,608,730 | - |
| Exhibit admissions | 2,256,963 | - | 2,256,963 | - |
| Membership dues | 3,577,724 | _ | 3,577,724 | - |
| Endowment and other investment income | 2,683,226 | 103,854 | 2,787,080 | _ |
| Publications and related revenues | 1,190,001 | _ | 1,190,001 | - |
| Education programs revenue | 1,575,145 | - | 1,575,145 | - |
| Collection sales (note 6) | - | 24,900 | 24,900 | - |
| Miscellaneous revenue | 734,860 | | 734,860 | |
| | 54,514,496 | 3,923,644 | 58,438,140 | - |
| Guest services (note 8) | 10,121,044 | | 10,121,044 | |
| Total operating support and revenue | 64,635,540 | 3,923,644 | 68,559,184 | <u> </u> |
| Expenditures: | | | | |
| Program services: | | | | |
| Bronx Zoo/Wildlife Conservation Park | 24,257,998 | 3,828,852 | 28,086,850 | - |
| Aquarium for Wildlife Conservation | 6,978,420 | 340,625 | 7,319,045 | - |
| International Conservation | 8,399,474 | _ | 8,399,474 | _ |
| Wildlife Conservation Magazine | 1,406,564 | _ | 1,406,564 | - |
| City Wildlife Conservation Centers (note 7) | 10,093,922 | 371,568 | 10,465,490 | |
| Total program services | 51,136,378 | 4,541,045 | 55,677,423 | |
| Supporting services: | | | | |
| Management and general | 4,594,470 | 24,554 | 4,619,024 | - |
| Membership activities | 1,816,386 | _ | 1,816,386 | - |
| Fund raising | 2,960,431 | _ | 2,960,431 | - |
| Centennial program | 1,226,054 | | 1,226,054 | |
| Total supporting services | 10,597,341 | 24,554 | 10,621,895 | |
| Guest services (note 8) | 5,560,808 | - | 5,560,808 | _ |
| Total expenditures | 67,294,527 | 4,565,599 | 71,860,126 | |
| Income stabilization adjustment (note 3) | 1,667,914 | _ | 1,667,914 | - |
| Excess of expenditures over operating support and revenue and income | | | | |
| stabilization adjustment, carried forward | (991,073) | (641,955) | (1,633,028) | |

WILDLIFE CONSERVATION SOCIETY

STATEMENT OF SUPPORT AND REVENUE, EXPENDITURES, CAPITAL ADDITIONS AND CHANGES IN FUND BALANCES (CONTINUED)

| | | OPERATING FUNDS | | ENDOWMENT FUNDS |
|--|-------------------------|-----------------|-------------|----------------------|
| | General | Capital | Total | |
| Excess of expenditures over operating support and revenue and income | | | | |
| stabilization adjustment, brought forward | \$ (991,073) | (641,955) | (1,633,028) | |
| Bequests | 3,518,146 | - | 3,518,146 | - |
| Net appreciation on investments | 5,438,095 | _ | 5,438,095 | - |
| Gain on investments | | | | 335,770 |
| Excess (deficiency) of support and revenue over expenditures before | | | | |
| capital additions | 7,965,168 | (641,955) | 7,323,213 | 335,770 |
| Capital additions: Contributions Net appreciation on investments | - - | - - | - - | 664,430 7,023,811 |
| Total capital additions Excess (deficiency) of support and revenue over expenditures after capital additions | 7,965,168 | (641,955) | 7,323,213 | 7,688,241 |
| Fund balances at beginning of year Capital transfer | 39,077,854 (641,955) | - 641,955 | 39,077,854 | 49,160,580 |
| Fund balances at end of year | \$ 46,401,067 | | 46,401,067 | 57,184,591 |

See accompanying notes to financial statements.

WILDLIFE CONSERVATION SOCIETY

STATEMENT OF CASH FLOWS YEAR ENDED JUNE 30, 1995

| Assets | OPERATING FUNDS | ENDOWMENT FUNDS | |
|--|-----------------|-----------------|--|
| Cash flows from operating activities: | | | |
| Excess of support and revenue over expenditures | | | |
| after capital additions | \$7,323,213 | 8,024,011 | |
| Adjustments to reconcile excess of support and revenue | | | |
| over expenditures after capital additions to net cash | | | |
| provided by (used in) operating activities: | | | |
| Net appreciation on investments | (6,311,282) | (8,154,309) | |
| Decrease in accounts receivable | 1,294,510 | - | |
| Increase in grants and pledges receivable | (1,015,277) | - | |
| Increase in inventories | (282,735) | - | |
| Decrease in prepaid expenses and deferred charges | 435,827 | _ | |
| Increase in accounts payable and accrued expenses | 36,516 | - | |
| Increase in deferred restricted support and revenue | 6,441,722 | | |
| Total adjustments | 599,281 | (8,154,309) | |
| Net cash provided by (used in) operating activities | 7,922,494 | (130,298) | |
| Cash flows from investing activities: | | | |
| Proceeds from sales of investments | 63,580,690 | 82,478,384 | |
| Purchases of investments | (58,844,981) | (82,348,086) | |
| Net cash provided by investing activities | 4,735,709 | 130,298 | |
| Net increase in cash | 12,658,203 | - | |
| Cash at beginning of year | 7,558,544 | | |
| Cash at end of year | \$20,216,747 | | |

See accompanying notes to financial statements.

WILDLIFE CONSERVATION SOCIETY

NOTES TO FINANCIAL STATEMENTS JUNE 30, 1995

(1)THE ORGANIZATION

The accompanying financial statements present the financial position, results of operations and cash flows of New York Zoological Society (NYZS) which is incorporated in New York State and exempt from Federal income taxes under Section 501(c)(3) of the Internal Revenue Code. Effective June 8, 1994, NYZS filed a Certificate of Assumed Name with the New York State Department of State under which it will use the name Wildlife Conservation Society (the Society).

(2)SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The financial statements of the Society have been prepared on the accrual basis, except for depreciation as explained below. Other significant accounting policies follow:

FUND ACCOUNTING

In order to ensure observance of limitations and restrictions placed on the use of available resources, the accounts are maintained in accordance with the principles of fund accounting. This is the procedure by which resources for various purposes are classified for accounting and reporting purposes into funds established according to their nature and purposes. Separate accounts are maintained for each fund; however, in the accompanying financial statements, funds that have similar characteristics have been combined into fund groups.

The assets, liabilities and fund balances of the Society are reported in two self-balancing fund groups:

Operating funds, which include unrestricted and restricted resources:

- Unrestricted funds represent the funds available for the support of Society operations.
- Funds restricted by the donor, grantor, or other outside party for particular operating purposes (including accessions and other capital additions) are deemed to be earned and reported as revenues of operating funds when the Society has incurred expenditures in compli-

ance with the specific restrictions. Such amounts received but not yet earned are reported as deferred restricted support and revenue.

Endowment funds include funds that are subject to restrictions of gift instruments requiring in perpetuity that the principal be invested and only the income be used.

PLANT ASSETS AND DEPRECIATION

Plant acquisitions including buildings and improvements constructed on land owned by the City of New York are not capitalized and, accordingly, depreciation is not recorded in the Society's financial statements. Major expenditures for buildings and improvements are reflected as capital expenditures in the accompanying financial statements.

COLLECTIONS

Expenditures for collections are not capitalized.

OTHER MATTERS

All gains and losses arising from investment transactions and the sale or exchange of other noncash assets are accounted for in the fund that owned the assets. Ordinary income from investments, receivables, and the like, is accounted for in the fund owning the assets, except for income derived from investments of endowment funds, which is accounted for, if unrestricted, as revenue of the unrestricted operating fund or, if restricted, as deferred revenue until the terms of the restriction have been met.

Enforceable pledges for operating purposes, less an allowance for uncollectible amounts, are recorded as receivables in the year made. Pledges for support of current operations are recorded as operating fund support. Pledges for support of future operations are recorded as deferred support in the operating funds. Pledges to the endowment funds are recognized upon payment of the pledge.

(3)**INVESTMENTS**

Investments are accounted for on a market value basis. The net appreciation (depreciation) on investments reflected in the accompanying statement of support and

revenue, expenditures, capital additions and changes in fund balances includes realized gains and unrealized appreciation (depreciation) in market value. The market value and historical cost of investments managed by the Society at June 30, 1995 were as follows:

| | Market Value | Cost |
|---|---|--|
| Operating funds Endowment funds Wallace Fund* | \$ 45,070,048 57,184,591 68,108,389 | 30,836,196 39,668,334 60,172,511 |
| | \$170,363,028 | 130,677,041 |

*The accompanying balance sheet does not include these investments which are managed by the Society on behalf of the Lila Acheson Wallace Fund for the New York Zoological Society (Wallace Fund) (see note 9).

Details of investments and pooled net assets managed by the Society at June 30, 1995 were as follows:

| | Market Value | Cost |
|------------------------|-----------------|-------------|
| Short-term | | |
| investments | \$ 9,955,002 | 9,962,873 |
| Corporate stocks | 121,065,933 | 83,392,991 |
| Bonds | 44,824,566 | 42,803,650 |
| Total investments | 175,845,501 | 136,159,514 |
| Net interfund payables | (5,482,473) | (5,482,473) |
| Pooled net assets | \$170,363,028 | 130,677,041 |

Investments are pooled on a market value basis with each individual fund subscribing to or disposing of units on the basis of the market value per unit, determined quarterly. Of the total units, each having a market value of \$376.89, 151,728 units were owned by the endowment funds, 119,584 units were owned by the operating funds and 180,712 units were owned by the Wallace Fund at June 30, 1995. The average earnings per unit, exclusive of net gains, amounted to \$10.19 for the year ended June 30, 1995.

The Society's investments are managed to maximize long-term total return. The Board of Trustees has authorized a policy permitting the use of total return at a rate (spending rate) of up to 5% of the average market value of its endowment funds and funds designated for long-term investment for the most recent three years. This policy is designed to preserve the value of these funds in real terms (after inflation) and provide a predictable flow of funds to support operations. Should interest and dividend income be less than the Board authorized spending level, current year's appreciation of investments, if any, is used to meet such shortfall. If the current year's appreciation is not sufficient to satisfy the shortfall, prior years' appreciation is appropriated to support operations. To the extent that prior years' appreciation is appropriated, it is reported as operating support and as a non-operating deduction from endowment funds and funds designated for long-term investment, as appropriate. During the year ended June 30, 1995, utilization of gains amounted to \$873,186 and \$794,728 from funds designated for long-term investments and endowment funds, respectively.

(4)RETIREMENT BENEFITS

All eligible Society employees are members of the Cultural Institutions Retirement System's (CIRS) Pension Plan, a defined benefit plan. Pension expense for the year ended June 30, 1995 was approximately \$1,066,000. The current year's provision includes amortization of prior service costs over a period of 30 years which commenced June 30, 1974. The Society's policy is to fund pension cost accrued.

Because the CIRS Pension Plan is a multi-employer plan, certain information with respect to vested and nonvested benefits as well as plan assets relating to Society employees is not readily available.

In addition to providing pension benefits, the Society provides certain health care benefits for retired employees. Substantially all of the Society's employees may become eligible for those benefits if they reach normal retirement age while working for the Society. The cost of retiree health care benefits is recognized as expense as claims are paid. For the year ended June 30, 1995, those costs totaled approximately \$440,000.

In December 1990, the Financial Accounting Standards Board (FASB) issued Statement of Financial Accounting Standards No. 106, "Employers' Accounting for Postretirement Benefits Other Than Pensions." Under Statement 106, the cost of postretirement benefits other than pensions must be recognized on an accrual

WILDLIFE CONSERVATION SOCIETY

NOTES TO FINANCIAL STATEMENTS JUNE 30, 1995

basis as employees perform services to earn benefits. The provisions of Statement 106 will be effective for the Society for the fiscal year ending June 30, 1996. The Society has not yet determined the impact of Statement 106 on its financial statements.

Park, Prospect Park and Queens Wildlife Conservation Centers providing for the Society's operation and management of these facilities.

(5) DEFERRED RESTRICTED SUPPORT AND REVENUE

The changes in deferred restricted support and revenue for the year ended June 30, 1995 were as follows in Figure 1:

(6) COLLECTIONS

During the year ended June 30, 1995 animal collection accessions aggregated approximately \$147,000 while proceeds from deaccessions aggregated approximately \$25,000.

(7) CITY WILDLIFE CONSERVATION CENTERS

The Society and the City of New York have entered into renewable agreements with respect to the Central

(8) GUEST SERVICES

General operating fund revenues and expenditures of guest services (consisting of food, merchandise sales and parking) for the year ended June 30, 1995 were as follows:

| | Revenues | Expenditures |
|-----------------------|------------|--------------|
| Bronx Zoo/Wildlife | | |
| Conservation Park \$ | 7,741,835 | 4,635,189 |
| Aquarium for Wildlife | | |
| Conservation | 1,890,210 | 925,619 |
| City Wildlife | | |
| Conservation Centers* | 488,999 | |
| \$ | 10,121,044 | 5,560,808 |

*Guest service operations at the Central Park, Prospect Park, and Queens Wildlife Conservation Centers have been contracted to independent vendors who make remittances to the Society based upon sales.

| E | 1 | II | D | T. | 1 |
|---|---|----|---|----|---|
| | | | | | |

| | Balance at beginning of year | Additions | Expenditures | Balance at end of year |
|-------------------------|------------------------------------|------------|--------------|------------------------------|
| Contributions, bequests | | | | |
| and fund raising events | \$ 14,328,931 | 10,044,764 | 4,502,985 | 19,870,710 |
| Wallace Fund | 2,947,592 | 6,900,000 | 6,082,224 | 3,765,368 |
| Fees and grants from | | | | |
| governmental agencies | 2,773,334 | 2,659,450 | 3,256,861 | 2,175,923 |
| Investment income | 1,114,407 | 1,986,385 | 1,723,932 | 1,376,860 |
| Net gains on investment | | | | |
| transactions | 236,665 | 248,015 | - | 484,680 |
| Other | 277,251 | 1,235,139 | 1,066,029 | 446,361 |
| Total | \$ 21,678,180 | 23,073,753 | 16,632,031 | 28,119,902 |

(9) LILA ACHESON WALLACE FUND FOR THE NEW YORK ZOOLOGICAL SOCIETY (WALLACE FUND)

The Wallace Fund was established for the benefit of the New York Zoological Society in 1982. It is governed by an independent Board of Directors, including representatives of The Reader's Digest Association, Inc. and of the Society. It is a separate New York not-for-profit corporation that has been classified by the Internal Revenue Service as a supporting organization under Section 509(a)(3) of the Internal Revenue Code (the Code) and recognized as tax exempt under Section 501(c)(3) of the Code.

In March 1991, the Wallace Fund entered into an investment delegation agreement with the Society pursuant to which the Society's investment committee assumed management of certain Wallace Fund assets which participate in the Society's pooled investment fund (see note 3).

Income of the Wallace Fund is granted each year to

support the beautification and maintenance of the Central Park Wildlife Conservation Center and Bronx Zoo/Wildlife Conservation Park, and such other programs as may be agreed upon by the Society and Directors of the Wallace Fund. The Wallace Fund granted \$6,900,000 to the Society during fiscal 1995.

As of June 30, 1995, the market value of the net assets of the Wallace Fund, including amounts managed by the Society, approximated \$197,594,000.

(10) RELATED PARTY TRANSACTIONS

The Society is the sole member of a not-for-profit corporation which was organized in 1989 for the purpose of acquiring, operating, and holding for investment certain residential real estate located in New York and offered for rent to employees of the Society. The Society has made cumulative contributions to this corporation of \$4,450,000, which were used by the corporation in connection with the purchase of residential real estate.

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(July 1, 1994 to June 30, 1995)

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FACTS AND FIGURES

The Society was founded in 1895 as the New York Zoological Society and chartered in the State of New York on April 26 of that year "to establish and maintain in said city a zoological garden for the purpose of encouraging and advancing the study of zoology, original researches in the same and kindred subjects, and of furnishing instruction and recreation to the people." The 265-acre New York Zoological Park (Bronx Zoo) opened to the public on November 8, 1899, built and then maintained with funds provided by the City of New York and private citizens. The Society assumed operation of the New York Aquarium in Battery Park in 1902, the Central Park Wildlife Center in 1988, the Queens Wildlife Center in 1992, and the Prospect Park Wildlife Center in 1993. The present Aquarium for Wildlife Conservation was opened in Brooklyn in 1957.

In 1897, the Society sponsored its first field project, a study of wildlife in Alaska and British Columbia. Since then the Society has helped establish more than 110 wildlife parks and reserves around the world, and we now conduct 270 field conservation projects in 51 nations. The world's first zoo animal hospital was built at the Bronx Zoo in 1916 and the first formal zoo education department was organized at the Zoo in 1929. This program now reaches more than 1.7 million schoolchildren in the New York metropolitan area and school systems in 46 states and several nations abroad.

MEMBERSHIP AND MAGAZINE

| Bronx Zoo | \$24,257,998 |
|---|--------------|
| Aquarium for | |
| Wildlife Conservation | 6,978,420 |
| Wildlife Centers | 10,093,922 |
| International Conservation | 8,399,474 |
| Total Society | \$67,294,527 |
| ATTENDANCE AT WCS FACI | LITIES |
| Bronx Zoo | 2,069,332 |
| JungleWorld | 626,612 |
| Children's Zoo | 435,175 |
| World of Reptiles | 677,874 |
| World of Darkness | 637,410 |
| Zoo Shuttle | 224,854 |
| Bengali Express | 467,936 |
| Skyfari | 406,179 |
| Camel Rides | 85,034 |
| Aquarium for | 05,054 |
| Wildlife Conservation | 766,818 |
| Central Park Wildlife Center | 862,665 |
| | 182,039 |
| Queens Wildlife Center | |
| Prospect Park Wildlife Center Total WCS Attendance | 254,979 |
| Total WCS Attendance | 4,135,833 |
| ENVIRONMENTAL EDUCATIO | N |
| Overall Attendance in Paid | |
| and Free Programs | 1,744,135 |
| Bronx Zoo | |
| Students in Organized Groups | 377,640 |
| Course Enrollment | 41,115 |
| Friends of Wildlife Conservation | 255 |
| Aquarium for Wildlife Conservation | |
| Students in Organized Groups | 226,172 |
| Course Enrollment | 28,779 |
| Volunteers and Interns | 250 |
| Central Park Wildlife Center | |
| Visitor Program | 284,678 |
| Students in School Programs | 4,559 |
| General Course Enrollment | 1,014 |
| Volunteers | 120 |
| Queens Wildlife Center | 120 |
| Visitor Program | 40,612 |
| Students in School Programs | 5,525 |
| General Course Enrollment | 515 |
| Volunteers | 513 |
| Prospect Park Wildlife Center | .76 |
| Visitor Program | 208 977 |
| Students in School Programs | 208,977 |
| General Course Enrollment | 4,062 |
| | 1,432 |
| Volunteers | 45 |

OPERATING EXPENSES

\$24,257,998

Bronx Zoo

| Members | |
|---|--------|
| Metropolitan Area | 53,18. |
| National | 15,20 |
| Wildlife Conservation magazine | |
| Circulation | 197,12 |
| Animal Censuses | |
| Bronx Zoo | |
| 3,700 animals of 525 species | |
| Children's Zoo, Bronx Zoo | |
| 405 animals of 97 species | |
| Aquarium for Wildlife Conservation | |
| 8,934 animals of 394 species | |
| St. Catherines Wildlife Survival Center | |
| 427 animals of 55 species | |
| Central Park Wildlife Center | |
| 950 animals of 103 species | |
| Queens Wildlife Center | |
| 399 animals of 54 species | |
| Prospect Park Wildlife Center | |
| 283 animals of 62 species | |
| Total WCS Census | |
| 15,098 animals of 1,290 species | |
| BIRTHS AND HATCHINGS | |

| irths and Hatchings | |
|---|-----|
| Bronx Zoo | 935 |
| Bronx Zoo Children's Zoo | 15 |
| St. Catherines Wildlife Survival Center | 55 |
| Central Park Wildlife Center | 112 |
| Queens Wildlife Park | 72 |
| Prospect Park Wildlife Center | 57 |

Leadership Positions in Wildlife Conservation

Curators, keepers, field biologists, veterinarians, and other scientists of the Wildlife Conservation Society participate widely in the collaborative wildlife conservation efforts of the American Zoo and Aquarium Association (AZA), which represents 167 accredited zoos and aquariums in North America, and the World Conservation Union (IUCN), a global network of governmental and non-governmental conservation organizations.

Below are listed Society staff who serve as officers in the work being performed by the AZA and the IUCN.

American Zoo and Aquarium Association (AZA)
Field Conservation Committee: William Conway,
Chairman

Species Survival Plan (SSP) Coordinators: Babirusa, Penny Kalk; Lowland gorilla, Dan Wharton; Asian wild horse, Patrick Thomas; Snow leopard, Dan Wharton; Sumatran rhinoceros, James G. Doherty; White-naped crane, Christine Sheppard; Great hornbill, Christine Sheppard; St. Vincent's Amazon, Don Bruning; Congo peafowl, Don Bruning; Mauritius pink pigeon, Kurt Hundgen; Chinese alligator, John Behler; Radiated tortoise, William Holmstrom.

North American Studbook Keepers: Lowland gorilla, Dan Wharton; African pygmy goose, Douglas Piekarz; Scarlet ibis, Anna Marie Lyles; Waldrapp ibis, Mark Hofling; St. Vincent's Amazon, Don Bruning; Mauritius pink pigeon, Kurt Hundgen; Common anaconda, William Holmstrom; Radiated tortoise, William Holmstrom; Indian black-pond turtle, William Holmstrom; Star tortoise, Kathy Gerety.

International Studbook Keepers: White-naped crane, Christine Sheppard; Mountain peacock pheasant, Don Bruning; Malayan peacock pheasant, Don Bruning; Chinese alligator, John Behler.

Taxon Advisory Group (TAG) Chairmen or Co-Chairmen: Deer, James Doherty; Old World monkeys, Fred Koontz; Ciconiiformes, Anna Marie Lyles and Sharon Reilly; Coraciiformes, Christine Sheppard; Parrots, Don Bruning; Crocodilians, Peter Brazaitis; Freshwater fishes, Paul Loiselle.

Scientific Advisory Groups (SAG): Systematics, George Amato.

The World Conservation Union (IUCN)

Advisory Group of the Sustainable Use Initiative: John Robinson, Chairman.

Steering Committee of the Species Survival Commission: John Robinson.

Equid Specialist Group: Patricia Moehlman, Chair-

Pigs and Peccaries Specialist Group: Andrew Taber, Deputy Chairman.

Hornbill Specialist Group: Christine Sheppard, Sec-

Tortoise and Freshwater Turtle Specialist Group: John Behler, Chairman; Michael Klemens, Action Plan Director.

CREDITS



HOATZIN IN THE AQUATIC BIRDS BUILDING, BRONX ZOO.

EDITOR: Donald Goddard
DESIGN: Julie Larsen Maher

WORLD MAP: Jean Wisenbaugh

PREPRESS: Four Lakes Colorgraphics Inc.

PRINTER: Cooper Printing

PHOTOGRAPHY: Michael Ach/Newsday, 27 (above); John L. Behler, 42; Elizabeth Bennett, 41; John Carlson, 20 (above), 31 (above), 37 (above); Martyn Colbeck, 32-33; Christa Conway, 7; William Conway, 15 (above); Robert A. Cook, 76; Dennis DeMello/Wildlife Conservation Society, cover, 8-9, 11 (above), 16 (right), 17 (top), 18, 25 (above), 27 (left), 39, 46 (right), 47 (upper left, above, and below), 48 (upper left), 49 (upper left), 50 (3), 51 (below), 55, 74; Michael Dick, 17 (above), inside back cover; Robert Essel, 52; Aaron Ferster, 13 (2); Mary Hilliard, 48 (lower left and right); Merryl Kafka, 29 (above); William Karesh, 20 (top); Laura Lee, 73; Laura Maloney, 30 (2); Luiz Claudio Marigo, 38; James McGoon, 10, 24, 28, 34; Maureen Meier, 67; Bill Meng/Wildlife Conservation Society, 11 (top), 26, 47 (left); Douglas Merriam, 14; Richard Miller, 5, 49 (lower left and right); Ken Murray/N.Y. Daily News, 16 (above); Tom Naiman, 25 (top); Michael Nichols, 22-23, 36, 37 (top); Debra Salomon, 29 (left); Michael Schwartz, 12; Barbara Singer, 3; SONY Music, 49 (above); Split Images, 19; Star Black, 48 (above), 51 (above), 66; Fiona Sundquist, 31 (cover photo), 35; James Tamarack, 15 (top); Jeanne Trudeau, 46 (top and above), 70; Art Wolfe, 53.

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RECOMMENDED FORM OF BEQUEST

THE TRUSTEES of the Society recommend that for estate planning purposes, members and friends consider the following language for use in their wills: "To the New York Zoological Society, a not-for-profit, tax-exempt membership organization incorporated in the State of New York in 1895, having as its principal address the New York Zoological Park, Bronx, New York 10460, I hereby give and bequeath for the Society's general purposes."

In order to help the Society avoid future administration costs, it is suggested that the following paragraph be added to any restrictions that are imposed on a bequest: "If at some future time, in the judgment of the Trustees of the New York Zoological Society, it is no longer practical to use the income or principal of this bequest for the purposes intended, the Trustees have the right to use the income or principal for whatever purposes they deem necessary and most closely in accord with the intent described herein."

If you wish to discuss the language of your bequest with a member of the Society's staff, please be in touch with the President's office (212) 220-5115.



WILDLIFE CONSERVATION SOCIETY